

WAIPARA RIVER MANAGEMENT STRATEGY

Prepared by the Waipara River Working Party



CONTENTS

Introduction	3
What is the Waipara River Management Strategy?	4
Strategy background	5
Physical description of the Waipara River	6
Ecology	8
Geology	10
Māori cultural values.	14
Geological, Ecological & Māori Cultural Values - Action Plan.	16
Quality of the river environment.	18
Access Rights And Privileges.	23
Recreational activities.	26
Karetu Bridge To White Gorge - Management Area.	32
White Gorge To Stringers Bridge - Management Area	35
Stringers Bridge To Barnetts Road - Management Area	38
State Highway 1 Bridge - Management Area	41
Wash Creek To Webbs Road - Management Area.	44
Waipara River Mouth - Management Area	47
Acknowledgements	51
References	52



White Gorge Upstream

MISSION STATEMENT: To ensure that the Waipara River is managed in a way that is environmentally sustainable while ensuring public access is maintained to areas of public interest.



INTRODUCTION

The Waipara River is a small sized, hill-fed river located on the northern fringe of the Canterbury plains within the Hurunui District. The river flows from the eastern foothills of the Southern Alps to Pegasus Bay in the west. The Waipara River is strongly influenced by the geology and structure of the area that it flows through and contains a number of historically, scientifically and naturally important sites. The river is highly valued by the community for its natural, physical, spiritual and recreational qualities. However, the river is coming under increasing pressure from competing demands that are affecting those qualities the community values. Vehicular access, recreational activities such as hunting and camping, and land use practices are seriously impacting on the natural, cultural, social and economic assets of the river.

The ownership regime in the river is complex with many of the adjoining landowners having ad medium filum aquae (AMF) rights. AMF rights are a common law principle that owners of land that is bounded by a (non-tidal) river are presumed to own the bed of that river to the middle of the stream, unless there is evidence or a statutory provision to the contrary. Due to the existence of AMF rights and property boundaries, parts of the riverbed are in effect private land and as such this has influenced the preparation of this Strategy. Use of the riverbed may involve crossing private land and users of the river are requested to respect this. The river is also bounded in parts by unformed legal road and by a number of small esplanade and recreation reserves owned by either the Department of Conservation or the Hurunui District Council. Where no other party owns the land, then the land is classed as un-alienated crown land and is administered by Land Information New Zealand (LINZ).

This management strategy has grown from a community desire to better integrate the protection and management of the land and ecological values with recreational values. The strategy sets out why the community values this environment, their concerns for it and a vision for its future. The strategy is divided into three sections. The introductory section provides a description of the river system, sets a context for the partnership that is inherent to the strategy and details where the strategy 'fits' in the legislative context. The second section of the strategy identifies the different management issues. Finally, the strategy looks at the different management areas and the actions that the community wishes to be implemented in each area.

The management areas of the river are as follows:

- Karetu Bridge to White Gorge
- White Gorge to Stringers Bridge
- Stringers Bridge to Barnetts Road
- State Highway 1 Bridge (Barnetts Road to Wash Creek)
- Wash Creek to Webbs Road
- Waipara River Mouth (Webbs Road to the coast)

An integrated approach to the management of the strategy will be required to fully implement this strategy. In addition, the strategy is a 'living' document and as such it is intended that it be reviewed as required after being adopted by the Hurunui District Council.



WHAT IS THE WAIPARA RIVER MANAGEMENT STRATEGY?

The Waipara River Management Strategy (WRMS) provides a framework for managing the Waipara River now and into the future. The Strategy is based on the work of the community as represented by the Waipara River Working Party. The strategy itself is a non-statutory document and is therefore flexible to address a wide range of functions. As a strategic document, WRMS feeds in to many of Hurunui District Councils functions and other management documents such as the District Plan, Annual Plans, Hurunui Community Long-term Community Plan (HCLTP), reserve management plans, financial planning and by-laws. It is also important to recognise the influence that national and regional legislation, strategic and policy documents have, such as the Regional Policy Statement, Natural Resources Regional Plan, Proposed Canterbury Land and Water Regional Plan, Canterbury Water Management Strategy, Waipara Catchment Environmental Flow and Water Allocation Regional Plan and the Reserves Act 1977. Such strategies and legislation may continually evolve and change and as such the WRMS is a “living document” and will be reviewed regularly as new information and insights become available.

The WRMS seeks to provide a balance between protecting and recognising the natural, physical and spiritual values of the river and the enjoyment of passive and active recreation. The WRMS has been developed recognising that land within the river is in various forms of ownership. The actions in the strategy are intended to provide a framework for ensuring that the key values of this environment including landscape qualities, sustainable land use and water quality are preserved for the enjoyment of both current and future generations.

The WRMS is a partnership between Hurunui District Council (HDC), Canterbury Regional Council (CRC), Department of Conservation (DOC), Tangata Whenua, riparian landowners and the communities within the strategy area. The concept of community for the purposes of the WRMS applies to all groups with an interest in the river, such as landowners, farmers, residents, visitors and developers, as well as those who visit the river to enjoy its recreational activities. All partners have a responsibility for different levels of investment, management and action along the river. Anyone who reads this document will have an interest in the Waipara River and its surrounds and will therefore be included in the definition of ‘partnership’.

The implementation of the WRMS will rely not only on HDC and CRC initiatives but also on a strong sense of ownership and commitment from the community based on the philosophy of this document. As such, the WRMS depends on the goodwill, co-operation, participation, and commitment from those identified as responsible for carrying out the actions.

The recommendations referred to in this strategy extend to the main stem of the river downstream from Karetu Bridge and all the land between the cadastral property boundaries designating private property on the true right bank to the cadastral property boundaries designating private property on the true left bank of the Waipara River. The WRMS does not directly address the future use, management and development in regards to the tributaries of the Waipara River.

Where any future development has been proposed it is recognised that this will occur either on land currently in public ownership or land that may be identified in the Council’s District Plans as future esplanade reserve. Land in private ownership will not be developed with walkways or any form of public access unless this is agreed to through negotiation between the Council and the landowners. Any development is likely to occur in a staged process recognising that this is a long term strategy for the Waipara River.



STRATEGY BACKGROUND

In August 2007 members of the Waipara River Protection Group (WRPG), a group of concerned landowners with land directly adjoining the Waipara River, gave a verbal presentation to the Hurunui District Council outlining their concerns regarding a number of issues in the Waipara River. Their concerns related to the use of four wheel drive vehicles; the risk from fires; use of firearms; damage to private property; illegal rubbish dumping; poaching and killing of livestock; theft; dogs and; verbal abuse from users of the river.

At its September meeting, the Council considered the issues raised by the WRPG. Council resolved to take a lead role in developing and facilitating solutions to the issues identified by the WRPG. Council also resolved to co-ordinate a meeting of statutory bodies and invite WRPG and representatives from the Combined Four Wheel Drive Club. The purpose of that meeting was to ensure that all groups that had some level of statutory control over elements of the river had a common understanding of the issues. It also enabled representatives of landowners and the Combined Four Wheel Drive Club to contribute their perspectives to the issues. At the meeting, attendees reached a clear consensus that the Waipara River was a special environment and that a management strategy was needed to ensure protection of the river and that the Hurunui District Council should take a lead role in developing the strategy.

In March 2008 Council resolved to develop a comprehensive management strategy for the Waipara River which would set out the means to resolve conflicting uses in the river as well as protect the natural values and health of the river and the surrounding environment. The Council agreed to the establishment of a working party process to develop the strategy for the river.

A public meeting was held in September 2008 to accept nominations for Working Party representatives from various stakeholder and community interest groups. The Working Party that was established sought to ensure that all community views and interests would be captured. The Working Party meetings were also open to individual members of the public. Members of the Working Party are listed in Appendix 1. The Working Party undertook two field trips to cover the entire length of the

river. These visits highlighted those parts of the river identified as having high levels of historical, geological and cultural values and also allowed the Working Party to see first hand the inappropriate use of the river and the detrimental environmental effects resulting from this use. The purpose of the Working Party was to identify the management issues associated with the Waipara River and recommend preferred management responses to the relevant statutory agencies.

The Working Party attended a series of meetings where a variety of working papers and guest speakers were presented. In addition, there is a wealth of existing information available on the Waipara River and these have been reviewed during the background research stage of the WRMS development. A list of references is provided at the back of this document.

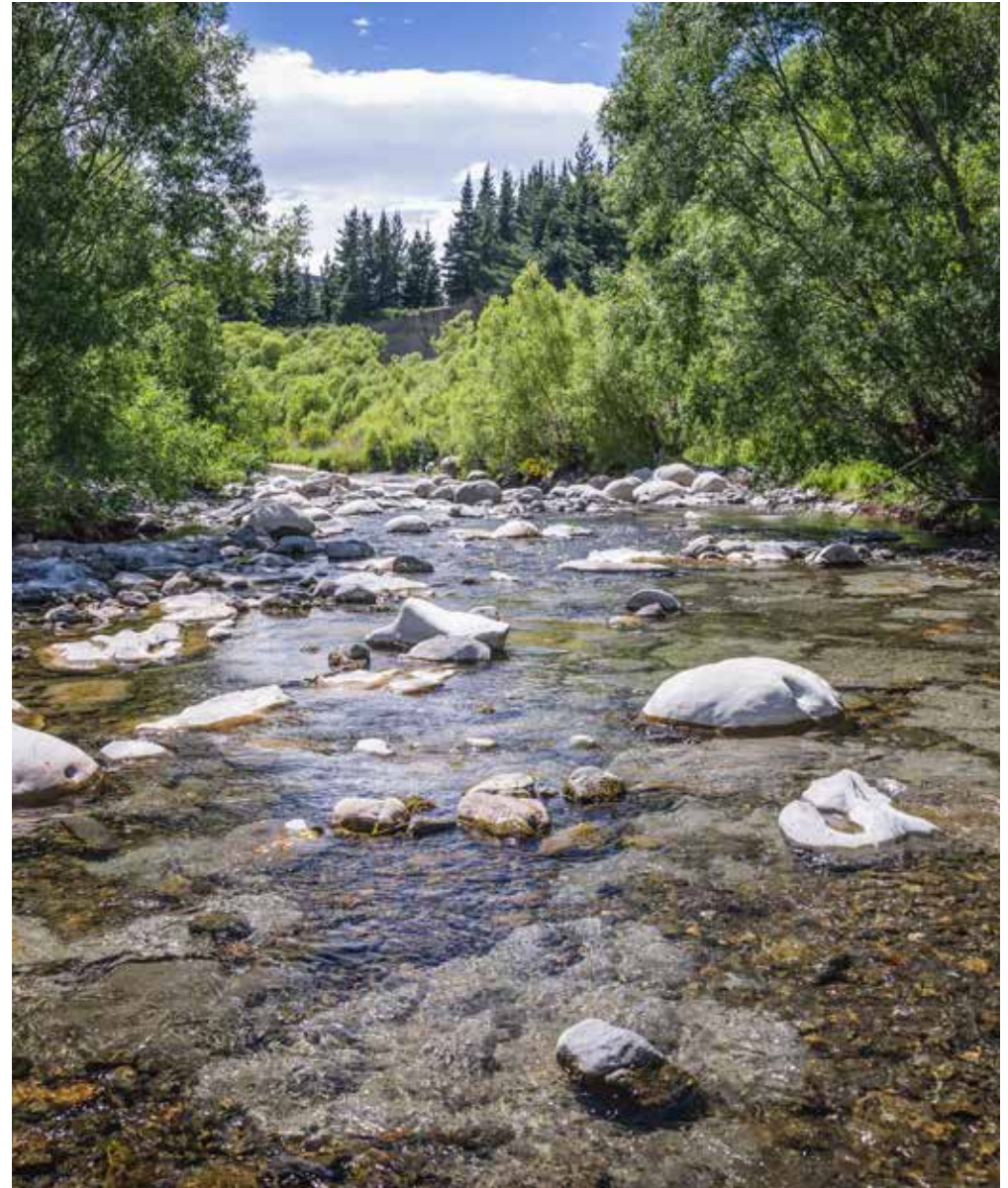


PHYSICAL DESCRIPTION OF THE WAIPARA RIVER

The Waipara River is a relatively small river situated at the northern fringe of the Canterbury Plains extending from the eastern foothills of the Southern Alps to the sea at the northern end of Pegasus Bay. The river flows some 40 kilometres from the Double Tops Range in the west to the Waipara Lagoon in the east. The catchment covers approximately 726km² and consists of foothills, an inland plain and a series of coastal hills. The catchment can be separated into two distinct parts. The steep rugged upper catchment is drained by four main tributaries; the North, South and Middle Branches of the Waipara River and Tommys Stream. The lower catchment is dominated by the wide flat plains of the Waipara Alluvial Basin and is bound to the east by coastal hills. Two main tributaries; Weka Creek and Omihi Stream flow from the north of the lower catchment into the river on the alluvial basin (Lloyd, 2002).

The river system is strongly influenced by the geology and structure of the area that it flows through. The upper catchment consists of moderate to steep hill country where greywacke and argillite sedimentary bedrock dominates. The North Branch initially flows eastwards from this hill country and then flows southward across Masons Flat, an inland basin which has formed from sediment deposits. The Middle and South Branches join the North Branch below Masons Flat to join the mainstem of the Waipara River. From the confluence of the three tributaries, the Waipara River becomes confined within the Ohuriawa Gorge as it re-enters greywacke/argillite bedrock that comprises the Doctors Hills. The Doctors Hills, together with Mt Grey to the south, form an identifiable boundary between the upper and lower sections of the Waipara Catchment (Chater, 2002). The lower catchment is dominated by a large alluvial basin that formed during the quaternary period by the deposition of glacial outwash and river gravels including some marine siltstones and sandstones (Chater, 2002). This basin is bounded by sedimentary rock types such as limestones, sandstones, mudstones and conglomerates which are all of tertiary age.

Between Ohuriawa Gorge (upstream) and White Gorge (downstream), and just before the Waipara breaks through the limestone escarpments to the west of South Dean, the river flows for about three kilometres through a depression that marks more erodible Cretaceous formations. This area is one of unique and internationally renowned geological significance. It contains the only known exposed,



Waipara River



continuous geological sequence from the Cretaceous to the Miocene; and many examples of fossilised material from the Mesozoic and tertiary periods. It is one of the few sites in the world where the Cretaceous-Tertiary (K/T) boundary is exposed. The landscape is a mix of limestone escarpments, alluvial terraces, and steep rocky bluffs and cliffs. The gorge area also contains spectacular landforms caused by the action of water on limestone, including the large, perfectly rounded stones termed concretions. Below White Gorge, the river flows eastward between terraces, below the general level of the Waipara alluvial plain. Weka Creek flows into the mainstem approximately 10km downstream of White Gorge. Omihi Stream flows into the mainstem just below State Highway 1. Below the Omihi confluence, the Waipara River cuts through the sedimentary rocks of the southernmost coastal hills at Teviotdale Gorge before exiting out and flowing across a narrow coastal plain to the Waipara Lagoon at the coast. The Waipara Lagoon is an important bird habitat consisting of mudflats around a lagoon that is only open to the sea during times of larger flows, typically in winter and spring.

The water resources of the Waipara Catchment are extremely variable with the catchment being located within a dry microclimate in addition to having poor water storage. The flow regime of the Waipara River is one of high flows and floods during winter months and long periods of low flows during summer and autumn. Extended periods of low summer flows are a particular feature of the river, in which flows of less than 100 l/s can last for several weeks. Periods of low flows can extend well into winter months during some years. However, short duration high volume floods can also occur. These are more frequent in winter but can also occur at other times of the year (Hayward et al, 2003). Annual mean flow is 3.0m³/s with a median flow of 1m³/s (Hayward et al, 2003). Land use in the mid and upper parts of the catchment accommodates extensive dry land pastoral farming and exotic forestry. The lower part of the catchment, with more fertile soils, warmer temperatures and easier country supports more intensive pastoral farming with specialised horticulture and cropping also present (Lloyd, 2002). In recent years this has included diversification into viticulture and olive plantations. In addition to land use intensification, there has been subdivision of larger blocks of land into small lifestyle blocks. The change in land use from pastoral farming to increased afforestation in the upper catchment

and increased viticultural, horticultural and lifestyle activities in the lower catchment has led to a significant increase in the use of water within the catchment.

Use of water from the Waipara River was reviewed by the Canterbury Regional Council and environmental flows have been set in the *Waipara Catchment Environmental Flow and Water Allocation Regional Plan* which became operative on 10 June 2012.



ECOLOGY

The Waipara River supports a variety of life forms and ecosystems, including indigenous plants, birds, aquatic macroinvertebrates, and fish. The Canterbury Regional Council undertakes ecosystem health monitoring on an annual basis at two sites located at Greenwoods (Teviotdale) Bridge and Laidmore Road. This involves sampling macroinvertebrates (small aquatic animals such as insect larvae, worms and snails) as indicators of the health of the aquatic ecosystem, and assessing the quality of the riparian and instream habitat.

Terrestrial vegetation

The upper tributaries of the Waipara River are generally bordered by indigenous grassland and shrubland in addition to a number of indigenous forest remnants some of which are identified in the Hurunui District Plan as Significant Natural Areas. A mix of indigenous and exotic shrubland is regenerating vigorously in many places in the upper tributaries of the river. Indigenous vegetation is limited along the main stem of the Waipara River and its lower tributaries although there are three threatened species present in the area: *Isolepis basilaris* (in serious decline, in the upper catchment), *Muehlenbeckia astonii* (nationally vulnerable, in the lower catchment), and *Myosurus minimum* (nationally endangered, in the lower catchment) (Mosley, 2003).

In general, the banks and berms of the Waipara River are predominantly vegetated with exotic plant species including introduced grasses and other low vegetation, shrubs (gorse, broom), and trees (predominantly willows). Many of the dominant plants are spread very effectively by flowing water (Mosley, 2003).

Birds

The Waipara River provides habitat for a number of threatened bird species including the wrybill, black-fronted tern, banded dotterel and bittern. The Waipara River and river mouth were rated in 1983 by the Department of Conservation (O'Donnell and Moore, 1983) to be of "moderate" and "moderate to high" value for wildlife. An assessment by O'Donnell (2000) ranked the river mouth as "High-3" (being of

national to international significance for threatened species) and the river as "High-6" (use by <10% of the total population of the threatened species that are present). Use of braided riverbeds by breeding birds occurs principally during late August to January/February.



Banded Dotterel

Aquatic Macroinvertebrates

The Canterbury Regional Council has carried out a number of surveys of the river and notes that the aquatic macroinvertebrate species found in the Waipara River are characteristic of Canterbury braided rivers. The most frequently sampled species in the mainstem include mayfly (*Deleatidium*) and Elmidae larvae. The invertebrate community and habitat are graded as generally only poor to fair, with a tendency for

the upstream sampling stations to receive higher gradings (Hayward et al., 2003). The available data indicates that the aquatic biota in the Waipara River is characterised by species found in a naturally unstable flow regime with long periods of low flow and periodic high flows. Disturbance by periodic high flows tends to produce a faunal community that does not include species that require stable substrates and stable algal covers.

Fish

The indigenous fish species found in the Waipara River are typical of those present in other Canterbury gravel bedded rivers. Extensive sampling of fish populations indicates that the distribution and density of fish are typical of East Coast South Island river's with no unusual or rare species. A survey of 17 sites in the Waipara River undertaken by Richardson and Jowett (1994) identified eight native species, plus brown trout in the river. In the headwaters the native fish population is dominated by upland bullies and common river galaxias, both of which live their entire lives in these freshwater areas. In the lower reaches, mainly torrentfish, bluegill bullies, and common bullies begin to dominate. Shortfin and longfin eels are found throughout the river system. More recent surveys have also found black flounder, lamprey and koaro (Mosley, 2003) and NIWA records indicate that common smelt, Stokell's smelt and inanga are also present in the river. Of the native species, long finned eels are in gradual decline nationally. Limited numbers of trout have also been observed in the river, but the Waipara River is not a renowned trout fishery (Mosley, 2003).

Native fish densities in the Waipara River are comparable with those in other rivers in the region (NIWA miscellaneous report, 1994). Flood flows are particularly important in the Waipara with regard to maintaining an open river mouth. Freshes peaking at about 9m³/s appear to be able to open the river mouth, which permits diadromous native fish to enter the river for spawning. The natural flow regime permits entry of fish during the spawning period in most but not all years (Mosley, 2003). However, there is no evidence that restricted access to the sea, caused by

the gravel bar at the mouth, has influenced the abundance of native fish. There are unlikely to be any problems with fish passage in the Waipara River given the fish species present. Eels are the only species found in the upper catchment that migrate and because of their ability to travel in small volumes of water, either as downstream adult migrants or juveniles moving upstream, low flows are unlikely to restrict movement.



Bluegill Bully



GEOLOGY

The Waipara River contains a number of historically and scientifically important sites, particularly in the upper reaches of the river where the sedimentary rocks contain significant amounts of information about the history of New Zealand. The Waipara region has experienced a number of geological processes and this can be seen and studied through the rocks that are exposed in the area. Many millions of years ago the entire Waipara area (together with much of the South Island) lay under the ocean. Tectonic activity has resulted in the rocks being uplifted over many millions of years to form the landscape that we know today. Over time, the Waipara River has cut its way down through the many different layers of rock exposing them and allowing access to the information contained in them. Of historical significance, is the fact, that it was in the Waipara River, that the first fossil bones to be discovered in New Zealand were found in 1859.

The most geologically rich areas in the Waipara River are upstream of White Gorge, although there are also geologically rich areas downstream of White Gorge e.g the Double Corner shell-beds. In that area, several rock formations crop out, each with its own suite of fossils (Fig. 1). These rock units form the cover sequence that was deposited on the older Torlesse basement after Zelandia (the New Zealand continent) broke away from Gondwana. At the bottom of the pile is the Broken River Formation, comprising mostly sandstones with thin coal seams and topped by the *Ostrea* Bed. This unit is not well exposed in the Waipara River. Next is the Conway Formation, which is famous for its marine reptile fossils, mostly contained in large nearly spherical concretions. Some of these concretions contain the bones of plesiosaurs and mosasaurs. A plesiosaur was a type of carnivorous marine reptile that grew up to 12 metres in length. Specimens from the Waipara River are mostly of elamosaurid plesiosaurs that are characterised by having exceedingly long necks with small heads. Mosasaurs were giant marine lizards up to 15 metres in length with a long head with numerous teeth, stout necks and long, slim bodies and tails. Both of these marine reptiles are extinct.

The next rock unit, the Loburn Mudstone is poorly exposed and has so far yielded very few fossils. It is overlain by the Waipara Greensand, which in recent years has been the source of numerous significant fossils. Among these are the teeth of about 17 species of shark, many of which are now extinct although some are still around today.

Several specimens of a very early penguin, *Waimanu*, which was first discovered in the 1980s and dubbed the “Waipara bird”, came from the greensand. More recent discoveries have allowed the characters of this ancient bird to be elucidated. The greensand is also the source of

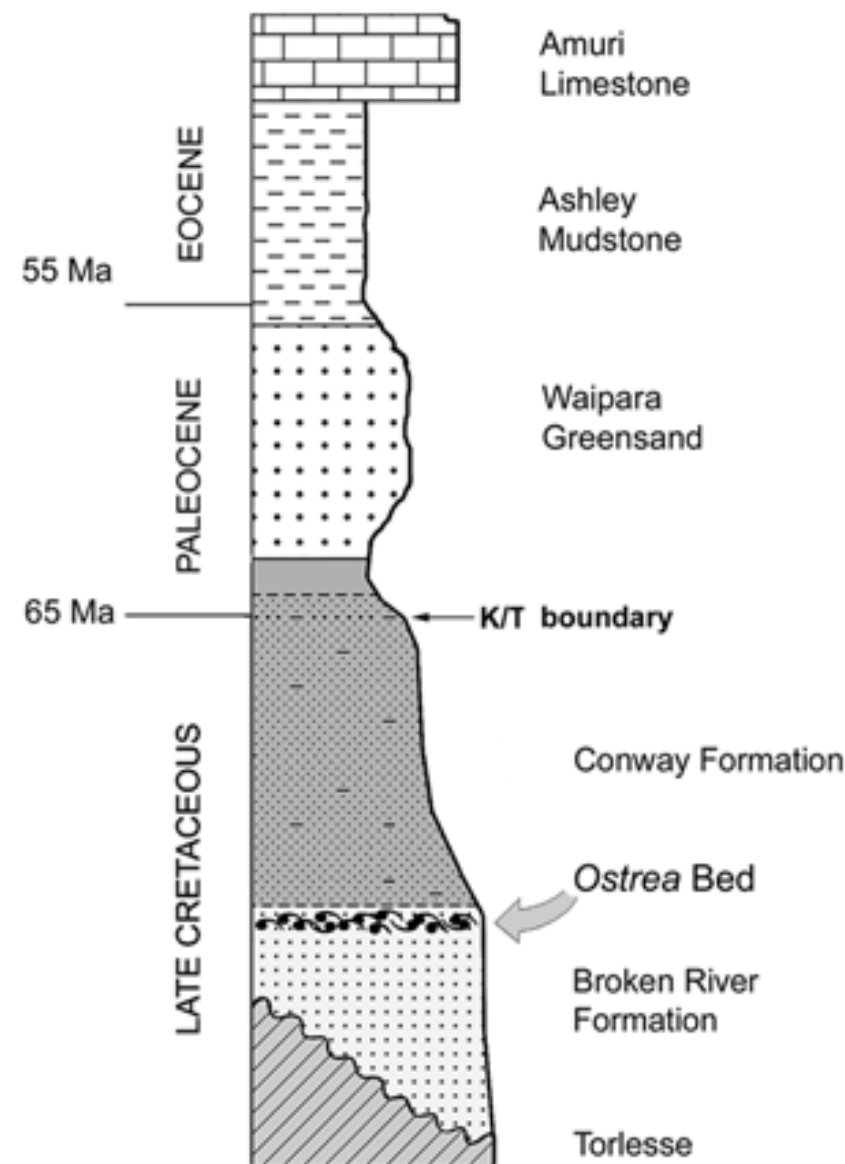


Fig. 1 Rock units in the Waipara River upstream of the White Gorge



several other fossils, including the enigmatic *Waiparaconus*, once thought to be a sort of stalked barnacle, but now believed to be a relative of corals.

The Waipara greensand is overlain by Ashley Mudstone, which is not well exposed so has not provided many fossils. It, in turn, is overlain by the Amuri Limestone,

a thick sequence of calcareous (limey) rocks in which several distinct units can be recognised. The presence of limestone also indicates that the land once formed part of the seabed, as limestone is a calcareous rock formed when marine shellfish and other animals of calcite structure die. The limestone is rich in fossilised shells and skeletal debris from the organisms that inhabited the warm, marine waters that were present at that time. These include marine invertebrates such as molluscs, brachiopods, bryozoans and many others. There are also a variety of trace fossils, mostly burrows, in some units.

Upstream of Laidmore Road the boundary between the Cretaceous and Tertiary periods (K/T boundary) can be viewed. The K/T boundary is a geological signature, usually a thin band, dated to (65.5 ± 0.3) million years ago. The boundary marks the end of the Mesozoic and the beginning of the Cenozoic era and is associated with the Cretaceous - Tertiary extinction event, a mass extinction that included the end of the dinosaurs. The site



Concretions found downstream of Laidmore Road

on the Waipara River is one of a few places in the world where the K/T boundary is exposed.

The historical importance of these sites is recognised in the New Zealand Geopreservation Inventory. The Geopreservation Inventory aims to list the best examples of

a wide diversity of natural and physical features and processes that characterise each part of New Zealand and document their complex geological / geomorphological history.

The Geopreservation Inventory includes five sites in the Waipara River. These sites are also recognised in the Hurunui District Plan as Significant Natural Areas (SNA) as shown in the table on page 12.

Section A7 of the District Plan sets out rules and standards for the protection of Significant Natural Areas. Rule A7.2.2 of the District Plan states that, *'No feature, tree, or vegetation in an area listed in the Schedule of Significant Natural Areas shall be damaged, removed*

or destroyed, except for exotic vegetation'. This effectively means that any person wishing to remove, damage or destroy any of the geological features requires resource consent to do so.

With respect to the importance of these sites, the Geopreservation Inventory uses the following classification system to identify the 'importance' and 'vulnerability' of



sites:

Importance:

A = site of international scientific importance

B = site of national scientific, educational or aesthetic importance

C = site of regional scientific, educational or aesthetic importance

Vulnerability:

1 = highly vulnerable to complete destruction or major modification by humans [i.e. small and/or fragile, could be destroyed by geological hammer]

2 = moderately vulnerable to modification by humans [i.e. could be destroyed by a bulldozer]

3 = unlikely to be damaged by humans [i.e. large or robust, not destroyed by either of the above]

4 = could be improved by human activity [e.g. weed spraying on or around the feature]

Therefore, three of the sites within the Waipara River are of international scientific importance with the vulnerability of the Waipara River Cretaceous “saurian beds”

being moderately vulnerable to modification by humans.

The community is concerned about the potential damage to these special sites from inappropriate vehicle use. Fossil sites and many smaller scale features cannot withstand the impact of human activities. Many of the fossilised beds are located on the banks and under the bed of the Waipara River and as such, they are particularly vulnerable to crushing and damage from motorised vehicles in these areas. Furthermore, the location of these historically and scientifically important sites is within an area of the Waipara River that is subject to AMF rights. Therefore, there is in actual fact no public access via Laidmore Road as this section of the river is effectively in private ownership. The only pedestrian and vehicular access to the geologically sensitive areas is across private land and as such the consent of the relevant landowners is required. It is noted that landowners in this section of the river have a long history of cooperating with scientists, students and hobbyists wishing to study the geology and fossils, as well as with walking groups and the general public.

Another concern of the community is whether the existing level of protection is sufficient particularly given the international significance of some of these sites. In this regard, it would seem that the provisions of the Hurunui District Plan are ineffective.

SNA Site	District Plan Map	Name	Description	Importance	Vulnerability
G30	3	Double Corner shellbeds	Diverse waiauan molluscs of Miocene origin in riverbanks and hillside	C	3
G31	3	Euscalpellum locality	Unique occurrence of abundant “barnacle” stalks of international interest	A	3
G34	3, 6	Waipara River Cretaceous-Palaeocene sequence	One of the most complete and well exposed sequences in New Zealand	A	3
G35	3	Waipara River Cretaceous “saurian beds”	The most prolific late cretaceous marine reptile locality in New Zealand	A	2
G36	3	Waipara River plioleistocene land molluscs	Unique pre-hawera land molluscs		
G40	2, 4	Greenwood formation Pliocene fauna	Best of very few late Pliocene shallow-water faunal localities in North Canterbury	C	3





The inside of a split concretion

In the past, visitors to the Significant Natural Areas including scientists, amateur collectors and the public in general have collected numerous fossils without applying for resource consent to do so. This is probably due to people being unaware that resource consent is required and therefore the provision of some form of education or information for the public could be beneficial in this respect. Rare fossils and natural artefacts can be vulnerable to over-collecting and some of the more unique specimens should be deposited in museums where they can be studied in detail and interpreted in displays for the public's benefit. In many instances, it may be best that fossils are left in the rocks so information about their settings can be obtained. However given the fluctuating nature of the river, fossils are continually being eroded from the river banks and washed down stream, so this information may be lost in any case.

Another issue identified by the community, is that the sites identified in the District Plan may not include all the geologically significant sites within the river. There is still a large amount of research being undertaken in the river and as such, there could potentially be other significant sites that are yet to be discovered.



MĀORI CULTURAL VALUES

Māori have long held an association with the Waipara River as it was once a significant mahinga kai and was part of the trading routes along the coast. The importance of the Waipara River and lagoon are reflected in the Statutory Acknowledgement under the Ngāi Tahu Claims Settlement Act 1998. This means that the Council must forward all relevant resource consents to Te Runanga o Ngāi Tahu and that the Historic Places Trust or the Environment Court must have regard for the statutory acknowledgement, to empower officials to enter into a deed of recognition and to give Ngāi Tahu Whānui proof of their long affiliation with the river. The Statutory Acknowledgement summarises the history that Ngāi Tahu Whānui have with the Waipara River in the following reference:

“Tradition tells of the duel between two famous rangatira (chiefs) which happened in this area. Tutewaimate, a Ngāti Māmoe rangatira, found that the northward trade route that he had sent his goods along was being disrupted by Moko, a rangatira of the Ngāti Kurī hapū of Ngāi Tahu who had been acting as a bandit along the route. Tutewaimate went to confront Moko, who lived in a cave at Waipara, but found him sleeping. Tutewaimate allowed Moko to awake before attacking him. Tutewaimate’s sense of fair play cost him his life and is recalled in a tribal proverb.

There are a number of Ngāti Wairaki, Ngāti Māmoe and Ngai Tahu urupā and wāhi tapu along the river and associated coastline. Urupā are the resting places of

Ngāi Tahu tūpuna and, as such, are the focus for whanau traditions Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The [Waipara] river and associated coastline was a significant mahinga kai, with kai moana [sea food], particularly paua, being taken at the mouth. The tūpuna had considerable knowledge of whakapapa [genealogy], traditional trails and tūranga waka [places for gathering food and taonga], ways in which to use the resources of the river, the relationship of people with the river and their dependence on it and tikanga

[customs] for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today. The mauri of the Waipara River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.”

Schedule 74 Ngāi Tahu Claims Settlement Act 1998

The deed of settlement signed under the Ngāi Tahu Claims Settlement Act 1998 also includes redress in the form of nohoanga camping entitlements. Nohoanga entitlements give Ngāi Tahu the exclusive right to camp temporarily at certain sites situated near rivers and lakes to facilitate customary activities such as fishing and gathering of other natural resources like plants. These nohoanga sites can only be created over



Wildlife at the river mouth



Crown land within the claim area. Nohoanga sites are located at traditional food gathering sites and do not allow for commercial use of the site. There are a total of 72 nohoanga spread throughout the South Island with each one around one hectare in size. The entitlements are seasonal and are a 'right to occupy' a site for up to 210 days per year between mid-August and the end of April. A nohoanga right is not a permit to kill species that are otherwise protected by conservation legislation. Public access to rivers or fishing rights are not affected within the designated area. There are two nohoanga sites within the Waipara River. The first of these is located at the riverbed at the Waipara River Mouth, opposite Lot 1 DP 17853. The second site is located part within the Waipara River bed adjoining Barnetts Road, Waipara.

There are a number of urupā (burial sites), waahi tapu (places of particular significance to local Māori that hold an element of sacredness due to a certain event), and waahi taonga (culturally, spiritually, physically and historically significant items) located in close proximity to Waipara River. The location of many of these sites is protected although the following sites are identified in Appendix A8.2 of the Hurunui District Plan – Schedule of recorded archaeological features:

No.	District Plan Map	NZAA	Description
A2	2	N34/1	Pa with middens
A5	2	N34/2	Midden(s), oven(s) & pit(s)
A10	2, 4	N34/3	Habitation cave or shelter without art
A11	2	N34/5	Habitation cave or shelter without art
A22	2	N34/10	Oven(s)/midden(s)
A23	2	N34/11	Oven(s)/midden(s)
A37	2	N34/6	Pit(s)

Key issues and opportunities identified through research and consultation

The Waipara River lies within the takiwa of Ngāi Tūahuriri. On behalf of the whānau of Ngāi Tūahuriri, the Ngāi Tūahuriri Rūnanga would seek to have the following

key outcomes recognised and provided for within the future management of the Waipara River:

- Protect and enhance the mauri of the river
- Protect all sites and values of tapu and taonga significance to Ngāi Tahu within the catchment of the river
- Enhance access by members of local Papatupu Rūnanga
- Protect mahinga kai values significant to Ngāi Tahu within the catchment of the river and the ecology that supports those mahika kai values
- Adopt catchment management as the means to achieving integrated management of the Waipara River and its tributaries
- Improve and restore degraded water quality within the river
- Provide a flow regime that adopts the priorities established in the Te Rūnanga o Ngāi Tahu Freshwater Policy
- Implement a flow regime for the river
- Preserve the existing natural ecological dynamics and habitat that support healthy populations of native fisheries and aquatic organisms
- Protect native bird habitats and plant with values within the river catchment
- Preserve the existing natural wilderness character and ecological conditions of the river catchment
- Adopt a precautionary approach to conversion of land use within the Waipara River catchment



GEOLOGICAL, ECOLOGICAL & MĀORI CULTURAL VALUES - ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Improve knowledge of and appreciation of ecological values important to the Waipara River	Support ongoing research and monitoring of ecological values	<ul style="list-style-type: none"> Identify timing and funding for ongoing research and monitoring 		HDC
	Promote community-based programmes such as “River Care”, as well as Council-led programmes	<ul style="list-style-type: none"> Hold open days displaying information on protecting the ecology of the river Update website regularly with information 		HDC, CRC, DOC
	Initiate a regime of regular ecological surveys of the Waipara River	<ul style="list-style-type: none"> Identify timing and funding for ongoing research and monitoring 		DOC
Improve knowledge of geological values within the Waipara River	Establish interpretative signage / display boards	<ul style="list-style-type: none"> Information to be provided on the Council’s website and through signage Interpretative signage to be established at relevant access point and / or car parking areas 	<ul style="list-style-type: none"> Interpretative signage installed Users of the river have an increased knowledge and respect of the geological features in the river 	HDC
Recognise the values that Tangata Whenua place on the resources in the Waipara River	Restore and enhance the river’s mauri (life force)	<ul style="list-style-type: none"> Complete a ‘cultural audit’ of the current state of the river’s mauri Provide opportunities for iwi participation in restoration projects Commence discussions regarding the nohoanga sites on the river 	<ul style="list-style-type: none"> Degree of satisfaction among Te Ngāi Tuahuriri Rūnanga 	
The significance of the river in Ngāi Tahu’s history is respected	Consult with iwi regarding their historical association with the river	<ul style="list-style-type: none"> Consult iwi prior to the dissemination of any interpretive material (signs or other written material) that provides information about sites of importance to iwi, iwi heritage values, or past and present cultural activities 		



What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Protect and enhance riparian margins, remnant wetlands and the coastal lagoon system	Promote and encourage local restoration initiatives, such as wetland restoration, by local landowners and community groups	<ul style="list-style-type: none"> • Provide contestable funds to encourage and assist with voluntary work that benefits the natural environment • Provide assistance with completing funding applications 	<ul style="list-style-type: none"> • Riparian margins, remnant wetlands and the coastal lagoon system are restored and enhanced 	HDC, CRC, DOC, landowners
	Replant public river margins with nominated eco-sourced species	<ul style="list-style-type: none"> • Identify appropriate species and management regime. • Identify and prioritise list of areas to be replanted. • Work in partnership with local landowners and tangata whenua • Work with established Landcare groups 	<ul style="list-style-type: none"> • Plantings of indigenous species along the river margins increases each year 	



QUALITY OF THE RIVER ENVIRONMENT

Plant and animal pests

The Waipara River has extensive infestations of invasive naturalised plant species, including old man's beard, willow, gorse and broom. The presence of these infestations poses a threat to adjoining farmland, may in places compromise the integrity of the riverbanks, prevents access over the berm lands and is frequently unsightly. Animal pest species are also present in the riverbed, notably rabbits, possums and small predator species. Animal pests threaten indigenous and introduced animals, including game birds and may threaten restoration plantings.

The legal obligations for plant and animal pest control are set out in the Canterbury Regional Pest Management Strategy 2005-2015. The Strategy provides a framework for efficient and effective management or eradication of specified animals and plants in the Canterbury region. The Strategy identifies the animals and plants that are classified as pests and also identifies other organisms that are to be controlled under the strategy in targeted high value environmental areas. There are also other organisms that are not formally included in the Strategy but are to be monitored through a Surveillance Project undertaken by the Canterbury Regional Council. Under the Pest Management Strategy, landowners are responsible for carrying out specified control of plants and animals declared as pests and there are regulatory procedures in place for those land occupiers that do not comply with the Strategy rules.

Willows

Willows were initially introduced into many Canterbury rivers as a means of bank stabilisation. The historical removal of indigenous forest from floodplains and riverbanks to enable pastoral agriculture had the unwanted side effect of accelerating bank erosion rates. The response has been to plant willows along thousands of kilometre of riverbank to replace the trees whose roots formerly resisted bank erosion. Some willow species such as grey willow (*Salix cinerea*) and crack willow (*Salix fragilis*) spread rapidly by stem fragments carried by water movement. Grey willow also spreads by seed or suckering from the roots. Crack willow is the predominant willow species in the Waipara River although grey willow was also observed on the field trips.

Willows are becoming increasingly well established in the river corridor and it appears that the Waipara's flood flows are unable to keep the riverbed clear. Bare gravels are being replaced by vegetated floodplains and islands. Encroachment by vegetation is converting it to a narrower, anastomosing river rather than a braided river. An anastomosing river is one that has several stable channels that flow between more or less permanent islands, as distinct from a braided river in which the braids and gravel bars are unstable and impermanent and change position with each flood. Mosley (2003) identifies that in many places the channel width has been reduced by 50-70% during the last 50 years. Mosley notes that to maintain the existing river form would require that floods be maintained or increased in size, frequency and duration, although the present trend may be to re-establish a more natural, pre-settlement river.

A method that has been utilised for the control of willows in other river catchments has been through the establishment of a river rating district. There are about 60 such schemes in place for rivers in Canterbury with seven in the Hurunui District including the Kowai River. The river rating group requires people whose land adjoins the river to contribute an annual rate based on the capital value of their property. In addition to the rates collected from private property owners, the Canterbury Regional Council and the Hurunui District Council contribute 25% each of the annual costs. The rates collected go towards clearing and maintenance of trees along the river. Overall, the financial input saves ratepayer money, as each time the river floods significant damage is caused to roads and bridges.

Preliminary discussions with the Canterbury Regional Council have indicated that the likely cost of establishing a river rating district, could be in the vicinity of \$10,000. In addition, a river rating district is generally only considered appropriate where there is a high potential risk of flooding. For instance, in the above example, there is a high flood risk for the Leithfield Township. The risk of flooding in the Waipara River may not be considered high enough to warrant the establishment of a river rating district.

Gravel extraction

Gravel extraction is an important tool for the management of aggrading rivers (with rising riverbeds). Riverbed gravels can be removed to maintain or increase flood



capacity, correct undesirable river alignments, reduce bank erosion, and prevent course change onto the adjoining floodplain. A managed gravel extraction regime can reduce river management costs, and improve flood control effectiveness. On the other hand, excessive gravel extraction, or extraction from degrading rivers (with falling beds) can pose an undermining threat to flood protection and erosion control works.

The input, movement and deposition of gravel in riverbeds is episodic and is affected by factors such as catchment erosive potential, channel and bank condition, and flood size and frequency. The correct management of gravel extraction can therefore be difficult, requiring an ongoing monitoring and review programme, and the ability to target gravel extraction in terms of location, quantity and timing.

Gravel extraction activities in the Waipara River are controlled by Canterbury Regional Council plans and the Hurunui District Plan. The Canterbury Regional Council has approved seven resource consents for gravel extraction with a total volume of approximately 79,000m³ per annum.

These activities are located around the end of Webbs Road and generally within the vicinity of the State Highway 1 Bridge. The Canterbury Regional Council released the Draft Canterbury Regional River Gravel Management Strategy (CRGMS) in May 2012. The draft CRGMS provides the framework for managing the extraction of gravel from rivers across Canterbury. The purpose of the strategy is to sustainably manage gravel extraction from rivers for natural hazard purposes that ensures community safety and well-being and to allow for sustainable economic development without compromising cultural, social and environmental outcomes and values.



Gravel extraction in the SH1 Bridge area

The draft CRGMS is a non-statutory document which aims to provide best practice objectives by joining up the range of outcomes in a collaborative process with all stakeholders and the community.

The effects of gravel extraction are wide-ranging, some positive and some negative. Recreational activities can be affected by gravel extraction. Recreation is restricted at gravel extraction sites by noise and safety concerns, e.g. no picnicking or swimming. Where extraction occurs in flowing water, the water becomes dirty from disturbed sediment deterring swimmers and detracting from amenity values of the river. Extraction can also change the riverbed area either improving or deteriorating the areas for recreational activities.

The ecological effects of gravel abstraction activities can be wide ranging, depending upon the extraction method and the environment being quarried. Gravel can be extracted intensively from confined areas, or extensively over large areas, and over short or long timeframes. It can also be taken anywhere from the 'wet' flowing channel, from dry or 'wet' pits on the river fairway, from 'skimming' or 'scalping' the fairway, or through to excavating higher floodplain areas inundated only on extreme events.

Community infrastructure such as road and rail bridges and water supply or irrigation intake structures, can be threatened by river bed aggrade or degrade. In the case of excessive degrade, bridge abutments could be undermined and pile exposure above bed level could increase, with a resultant increase in the risk of undermining due to scour, or damage during earthquake.

Sediment supply to the Canterbury coast is derived from numerous sources such as, but not exclusively, rivers, eroding cliffs, eroding beaches themselves and longshore



transport from other parts of the coast. Whether a beach is stable, accretionary or erosional, is dependant on the balance between the quantity of sediment entering the coastal system and the quantity of material being lost from the system. Any reduction in the supply of sediment to the coast could cause a change in this balance, either initiating erosion or exacerbating erosion on an already erosional beach. The effects of fluvial extraction on coastal stability may not be immediately obvious. It may take some time, possible years or even decades, for any bedload deficit to the coast to manifest itself by way of a change in erosion rates. The difficulty arises when trying to quantify the potential impacts of gravel extraction on coastal erosion. Generally this must be done using a sediment budgeting approach but unfortunately, quantities of the various components which go into constructing coastal sediment budgets are still not known to any certainty.

Gravel extraction can also have an effect on groundwater quality. If gravel extraction occurs from the bed of a river above a shallow, unconfined aquifer, there will be a reduction in the depth of gravel above the aquifer. With a reduction in gravel depth between the bed of the river and the underlying aquifer, the potential exists for leakage from the river into the shallow groundwater system. Leakage of river flow into groundwater may also result in any contamination within the river flow to filter downwards into the groundwater system.

A report prepared for Canterbury Regional Council in 2006, 'Waipara River report status of gravel resources and management implications' provides a review of the changing bed profile in the river and extraction records to assess the available gravel supply. The report concludes that there is likely to be a sustainable gravel supply of around 2,000m³/y. The report notes that the current rate of gravel extraction (average of 14,900m³/y from 1994 to 2005) is well in excess of what can be sustainably taken without lowering the river bed levels. The report recommends that a monitoring programme to record river bed levels for use in assessing bed status and changes should be commenced. In addition, to decide whether further gravel extractions from the Waipara River should occur in the future (and if so where from and in what quantity) an assessment of the required and existing flood capacity and minimum bed levels to protect infrastructure is required. This assessment would

yield design bed levels against which river management decisions could be made.

Water quality

The Canterbury Regional Council currently measures the water quality of the Waipara River at four sampling sites on a quarterly basis (once every three months). These sampling sites are situated at Laidmore Road, Stringers Bridge, Mt Cass Road and Greenwoods (Teviotdale) Bridge. Field measurements are taken of dissolved oxygen and temperature and the samples are analysed in the laboratory for pH, conductivity, turbidity, suspended solids, dissolved organic carbon, nitrate-nitrite nitrogen, ammonia-nitrogen, total nitrogen, dissolved reactive phosphorus, total phosphorus and E. coli. The Canterbury Regional Council's water quality scientists believe that the Waipara River is one of the most well studied rivers in terms of overall water quality and invertebrate numbers.

A report completed in 2003 by the Canterbury Regional Council (Hayward, et al.) provided an assessment of the water quality and ecosystem monitoring of the Waipara River from 1999 to 2002. The report concluded that periphyton growth and consequent loss of aesthetic and aquatic ecosystem values were the main water quality issue in the Waipara River. The development of periphyton is a complex interaction between nutrient supply and flow regime therefore managing adequate flows will be important for managing periphyton. The report notes that ongoing monitoring of the Waipara River on a quarterly basis will provide valuable long-term data on trends in the river.

Mosley (2003) identifies the water quality in the Waipara River as being better in many respects than that of other Canterbury rivers that rise in the hill country. The report notes that water temperatures at Stringers Road and Teviotdale Bridge often exceed 20 degrees Celsius and periodically exceeds 25 degrees Celsius and that it is likely that higher temperatures are experienced in the semi-braided reach from Stringers Road to the Omihi Stream confluence. The report concludes that the concentrations of dissolved organic nitrogen and dissolved reactive phosphorus in the river are such that the Waipara is classified as eutrophic; bacteriological water quality is better than the guideline for contact recreation for much of the time, but shows some signs of contamination by livestock.



In terms of the Canterbury Regional Council's Natural Resources Regional Plan (NRRP), the grazing of livestock in the riverbed is permitted subject to meeting certain conditions (refer to Rule WQL 21 Discharge of contaminant into water in a river, lake, or wetland from livestock in or near water, or disturbance of a wetland or the bed of a river or lake by livestock). However, there are some areas where stock are not allowed in riverbeds to protect areas which have particular values (e.g. freshwater bathing sites, fish spawning habitats and community drinking water intakes). The Waipara River contains one freshwater bathing area as listed in Schedule WQL7 of the NRRP which is identified as the Waipara Boys Brigade Camp. Therefore livestock are not permitted within a flowing reach of the river for one kilometre upstream of the Waipara Boys Brigade swimming hole located at the end of Darnley Road.

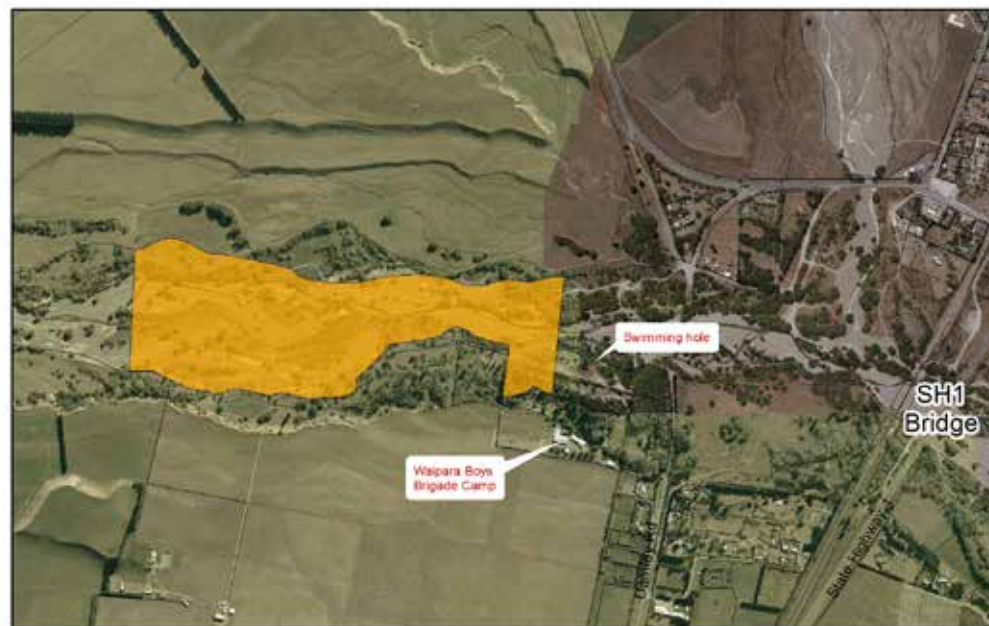
The Canterbury Regional Council has also notified the Draft Land and Water Regional Plan in August 2012. The Plan also contains rules regarding stock exclusion from waterbodies. The rules are similar to those contained in the NRRP and with cattle or farmed deer being prohibited from the riverbed within 1000 metres upstream of a fresh water bathing site listed in Schedule 6 (Rule 5.134) with the grazing of stock in all other areas being dependent on certain conditions being met (Rule 5.135). All the rules in the Proposed Canterbury Land & Water Regional Plan have effect from 11 August 2012.

Rubbish

The disposal of rubbish, especially household waste, garden waste and abandoned vehicles is an important management issue. Rubbish is removed periodically from the river at a cost to the Hurunui District Council. However, getting rubbish out of the river, particularly with respect to car bodies and larger appliances can be problematic. In many instances, the areas where material has been dumped can be inaccessible to vehicles required to remove the rubbish. Illegal dumping of waste can be detrimental for the environment in a number of ways. Illegal dumping can disrupt natural processes on land and in the water. Dumped household appliances and cars are not only an eyesore, but can also release toxic chemicals. The run-off from improper disposal of toxic substances such as motor oil or household clean-

ers can contaminate the river. Dumping of household waste can attract pests and diseases. Garden waste can contain weed seeds and vegetation fragments that may establish and become a nuisance.

The illegal dumping of waste is an offence against the Litter Act 1979. The Council has a number of available enforcement options including the issuing of an infringement notice (maximum \$400 fine) or prosecution through the Courts. The penalties of being found guilty at court are high and result in a fine of \$5,000. If the illegally dumped litter was of such a nature as it could endanger any person (example - any bottle whether broken or not, glass, article containing glass, sharp or jagged material, or any substance of a toxic or poisonous nature), those responsible could be sentenced to a maximum of one month imprisonment and/or a maximum fine of \$7,500.



Livestock prohibited areas shown in orange



QUALITY OF RIVER ENVIRONMENT – ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
To protect and enhance the natural character of the Waipara River	Support pest and weed control activities of all agencies and landowners	<ul style="list-style-type: none"> • Work collaboratively with private landowners to develop pest control strategies • Work collaboratively with landowners to support community initiated control of pests 	<ul style="list-style-type: none"> • Pest control strategies are developed 	HDC, CRC, DOC
	Reduce current levels of pests and weeds	<ul style="list-style-type: none"> • Carry out an exercise to scope costs to remove willows from the fairway of the river with an outline of a river rating / potential pest control programme • Notify landowners of any new potential pest and weed threats • Monitor CRC's pest and weed benchmarking and monitoring programmes • Encourage gravel extraction consent holders to remove all willow within the bed of the river within proposed gravel extraction areas 	<ul style="list-style-type: none"> • Public support for controlling willows has been ascertained. 	HDC, CRC
	Ensure that the gravel abstraction consenting process is based on sound data and current environmental conditions	<ul style="list-style-type: none"> • Establish a monitoring programme to record river bed levels for use in assessing bed status changes and minimum bed level to protect infrastructure 		CRC
	Maintain water quality and habitat in the mainstem of the river	<ul style="list-style-type: none"> • Ensure that suitable monitoring programmes are in place; especially at high risk areas • Ensure water quality monitoring data is easily accessible to the public 		CRC
	Reduce the volume of rubbish dumped in the riverbed	<ul style="list-style-type: none"> • Support volunteer groups currently working to clean rubbish out of the riverbed • Support a 'take it in, take it out' policy on rubbish • Issuing of infringement notices where perpetrators can be traced 	<ul style="list-style-type: none"> • The volume of rubbish collected on 'clean up days' reduces each year • The number of service requests regarding rubbish complaints reduces each year • The number of infringement notices issued reduces each year 	HDC



ACCESS RIGHTS AND PRIVILEGES

The public has a long held expectation that they have unrestricted access to and along water margins. For Māori, this expectation is based on customary access and use of coastal resources, confirmed by the Treaty of Waitangi. For other New Zealanders, this expectation is founded on a legal history of reservations along water margins for public use.

The 'Queen's Chain' is often used to describe land under various mechanisms and legislation that provide access along river margins. Most people understand the Queen's Chain to be a 20 metre strip along the edge of substantial rivers, lakes and the coastline, and owned by the Crown or local authority. It is assumed that the public has a right of access along this strip. However, the legal reality is quite different. At no time has New Zealand law established that the public has full rights to access, or use of land alongside all rivers, lakes and the coastline. Over time, a number of different statutes have established partial public ownership of land along water boundaries. However, it is often difficult for the public to ascertain exactly where there is public access and where there is private land with no right of access. This is particularly the case in the Waipara River where many properties have *ad medium filum aquae* (AMF) rights to the middle line of the river.

Ad medium filum aquae (AMF) rights

Ad medium filum aquae (AMF) rights is a common law principle that owners of land that is bounded by a (non-tidal) river are presumed to own the bed of that river to the middle of the stream, unless there is evidence or a statutory provision to the contrary. AMF rights are limited and do not include rights to interfere with the natural flow of a river to the injury of other riparian owners, nor to interfere with rights that have accrued to the public, such as where an esplanade reserve has been created. The boundary of the property is liable to move with the river. The ownership rights are therefore not complete rights, and accordingly will not generally be recorded on the computer register.

There is no requirement to "claim" AMF rights through any official process. At common law, the default position is that the presumption will apply and the owners of riparian land on non-tidal and non-navigable rivers own the land under the river to the centre line. Whether riparian owners along the Waipara River have property rights to the middle of the river bed will depend upon several factors and specific

assessment of each parcel of land. However, it is acknowledged that many of the properties adjoining the Waipara River are subject to AMF rights and as such large sections of the riverbed are considered to be in private ownership. Therefore, any person wishing to access those parts of the river subject to AMF rights are required to get the permission of the relevant landowners.

The New Zealand Walking Access Commission has released the New Zealand Outdoor Access Code ('the Code'). The Code was developed in response to a requirement under the Walking Access Act which came into force in 2008. The Act established the New Zealand Walking Access Commission, which now provides a central point for the co-ordination of all walking access in New Zealand. The Code notes that there is no right of access over private land. Owners of private land have an inherent right of exclusive occupation and enjoyment of that land. This right is enforceable by the provisions of the Trespass Act 1990 which provides for the rights of an occupier of land to deal with any person that unlawfully enters onto land.

Unformed legal roads

Most of the road network in New Zealand was created by reservation of land on the initial sale of land to settlers. The water margin reserves generally took the form of legal road. Not all the land set aside as road has been formed into recognisable surfaced roads and the water margin land reserved as road was, for the most part, never intended to be formed. These water margin reservations were created as roads, as this was the most convenient and secure legal form available at that time to ensure that this land was kept for public use.

Unformed legal roads or 'paper roads' as they are often referred to, are no different in law from formed roads. That is the public have the right to use them on foot, on horse, or in vehicles without hindrance from the adjacent landowner or anyone else. There is a right to assert unhindered passage at all times, however, this right only applies to the unformed legal road and any deviation off the unformed legal road onto private property, is trespassing. In terms of the Waipara River, there is an unformed legal road along the north bank of the river from Stringers Road Bridge to approximately 1.5 kilometres upstream of White Gorge. However, on the field trips it was established that it would not be possible to access White Gorge by vehicle along this unformed legal road due to the topography and effects of erosion.



Esplanade strips and reserves

Section 6 of the Resource Management Act 1991 (RMA) makes provision for the creation of esplanade strips and reserves on land adjoining the river where subdivision has occurred. Esplanade reserves, esplanade strips and access strips, collectively referred to as esplanade areas, are statutory mechanisms to protect riparian and coastal margins. The protection of these margins helps to conserve environmental values and provides opportunities for public access and recreational use.

Esplanade reserves may be required when land is subdivided or alternatively they can be created voluntarily. They are classified as reserves under the Reserves Act 1977 and land ownership is transferred upon deposit of the subdivision plan to the territorial authority. The boundary of an esplanade reserve is measured from the bank of the river and the landward line is a fixed survey line. Accordingly, the landward boundary does not change as the water boundary accretes or erodes. There are two esplanade reserves located adjacent to the Waipara Boys Brigade Camp in the State Highway 1 bridge area. The westernmost reserve is owned by Hurunui District Council with the easternmost reserve being owned by the Department of Conservation.

An esplanade strip is a form of easement over water margin land, created in favour of the territorial authority. They are usually created at the time of subdivision and are a width of 20 metres or less. The easement is registered on the certificate of title, but the land within the strip remains in the ownership of the land owner. Therefore an esplanade strip does not extinguish AMF rights. Although identified on a survey plan, they do not need to be formally surveyed. The creation of a strip, and restrictions and requirements relating to its use and management, are noted on the title and bind every party having an interest in the land. The form of the agreement and standard restrictions to be imposed on esplanade strips are defined in Schedule 10 of the RMA. This specifies that the following acts are prohibited on the land over which the esplanade strip has been created

- (a) Lighting any fire:
- (b) Carrying any firearm:
- (c) Discharging or shooting any firearm:

- (d) Camping:
- (e) Taking any animal on to, or having charge of any animal on, the land:
- (f) Taking any vehicle on to, or driving or having charge or control of any vehicle on, the land (whether the vehicle is motorised or non-motorised):
- (g) Wilfully damaging or removing any plant (unless acting in accordance with the Biosecurity Act 1993):
- (h) Laying any poison or setting any snare or trap (unless acting in accordance with the Biosecurity Act 1993).

Esplanade strips can include provisions to exclude access by the public during certain times or under certain conditions. Unlike esplanade reserves, the width of an espla-



Rock formations upstream of Laidmore Road



nade strip remains unchanged within the same allotment. So if a river bank is eroded by 2 metres, the width of the esplanade strip then extends beyond its old boundary by 2 metres to offset the lost ground.

Under the RMA, esplanade reserves or strips are mandatory in the case of subdivision to lots of less than four hectares. No compensation is payable to the landowner, as the benefits accruing from the subdivision can be seen as compensation for the reserve or strip that is taken.

The Hurunui District Plan provides for the establishment of esplanade reserves or strips in respect of subdivision of four or more hectares along the Waipara River. However, the RMA requires that compensation must be paid to the landowner. The requirement for compensation greatly limits the likelihood of the creation of esplanade reserves, or strips on subdivision of lots of four hectares or more. Furthermore, the provision of a 20 metre wide esplanade strip along the margins of the Waipara River is not practicable in many instances given the topography of the land adjoining the river.

Access strips

Access strips are created by an agreement between a territorial authority and a landowner, and are easements over land for a defined purpose and for specific users, rather than for general public access. They are similar to gazetted walkways in that they are surveyed, recorded on the certificate of title and do not move if the waterway moves, and ownership remains with the landowner.

Private land

The terms of access over private land are a matter for negotiation, and landholders have the right to refuse access or to apply conditions. If somebody is interfering with the rights of an occupier of land by entering their property, there are remedies under the Trespass Act 1980. Disturbing domestic animals; setting traps; opening and leaving open a shut gate, or unfastening and leaving unfastened a fastened gate, or shutting and leaving shut an open gate on private land; are all offences under the Trespass Act 1980.

The process for dealing with trespassers under the Trespass Act includes giving a warning to a person who is trespassing. If the person then refuses to leave, they commit an offence against the Act. However, the offender has several defences, such as proving that it was necessary to remain for their protection or to protect someone else. If the person has left the property then, to prevent future trespassing, a trespass notice should be served on the person (this is referred to in the Act as a “warning to stay off”). Once someone has been given a warning to stay off, they commit an offence if they enter the property within two years and may be prosecuted. The process for serving a trespass notice is set out at www.police.govt.nz/safety/home.trespassnotice.html.

Access users who are on private land without permission must be warned before they commit a trespass offence. Because of the difficulties in knowing where property boundaries are on the ground, it may be hard to determine whether or not trespass has actually occurred.

Where we are now

The research and consultation undertaken both prior to and during the development of this strategy has identified the key issue with regard to access rights and privilege is that adjoining landowners with AMF rights would like users of the river to respect their private property rights. Some landowners feel that if the public want access to their property, then the relevant landowners should be asked for permission to access their properties. A number of submissions to the draft Strategy noted that getting landowner approval from all adjoining landowners would be difficult and onerous in terms of knowing who to contact and how to contact them. Additionally, as mentioned above, it can be difficult to determine on the ground whether you are on private land or publicly accessible land.



RECREATIONAL ACTIVITIES

The Waipara River has a long history of being a significant recreational asset to the community. There is a range of land and water based activities provided for on the Waipara River including walking, four-wheel driving, swimming, fishing, hunting and camping. People are attracted to the river for its semi wilderness nature, distinctive character, to enjoy the outdoors, engage with nature and to make use of the recreation and leisure opportunities it provides. There are three main concerns relating to recreational activities in the river: access and opportunities, conflicting activities and water quality.

Walking, mountain biking and horse riding

Horse riding, cycling and pedestrian access are presently provided for informally within the riverbed on tracks and open ground. These are shared tracks that are generally used by motor vehicles. Purpose built tracks established elsewhere, such as at Bottle Lake Plantation and in the Waimakariri River Regional Park, have proved very popular. The Waipara River offers good potential for the development of such tracks on Crown land or areas where adjoining landowners with AMF rights will allow this type of development.

Motorised vehicles

Four-wheel driving and motor-biking are popular recreational activities in the Waipara River with motor vehicle access to the riverbed being largely unrestricted at present. Several roads and access points provide access to the river with the riverbed accessible to motor vehicles during periods of normal and low river flows. Over 350 submissions were received on the draft Strategy from four wheel drive enthusiasts requesting that the river upstream from the estuary to White Gorge remain available for four wheel driving activities. However, motor vehicle use has encouraged misuse and vandalism in the riverbed, notably dumping of garden waste and rubbish (including vehicles) and destruction of private property including fences, pump sheds and other structures located along the river banks. In addition, motorbikes in the riverbed are noisy and are often travelling at speed. Submitters to the draft Strategy suggested that the statutory agencies work with organisations such as the Combined Four Wheel Drive Clubs and the New Zealand Four Wheel Drive Association to educate those that are using the river irresponsibly. In addition,

it was noted that the law relating to vehicles on the road applies equally to the riverbed and that registered and warranted vehicles acting lawfully with sober drivers should not be restricted. The relevant rule is the Land Transport (Road User) Rule 2004. Under this rule, a road is interpreted as including:

- (a) a street; and
- (b) a motorway; and
- (c) a beach; and
- (d) a place to which the public have access, whether as of right or not; and
- (e) all bridges, culverts, ferries and fords forming part of a road or street or motorway or a place referred to in paragraph (d); and
- (f) all sites at which vehicles may be weighed for the purposes of the Act or any other enactment.

Under this definition, the Waipara River bed is considered to be a road as the definition provides that a road includes a place to which the public have access, whether as of right or not. Accordingly, any users of the Waipara River must comply with the relevant provisions of the Road User Rules, which include complying with the appropriate speed limits; vehicles must have a current warrant of fitness and registration; operating a vehicle that creates noise that is excessive and; operating a vehicle on or in which is carried a firearm that is loaded with a bullet. This provision would preclude spotlighting and any shooting from a vehicle in the riverbed.

Jet boating

The Waipara River has had a speed uplifting in place since 26 September 1974 and during times of high flows, is popular with adventure boaters who launch at Greenwoods (Teviotdale) Bridge and go up as far White Gorge, sometimes further if flows allow. Jet boats only use the river during high flows and as such the activity is less likely to conflict with other users of the river. In terms of AMF rights, these only apply to the bed of the river and any water flowing over the bed of the river is incapable of ownership. Therefore, activities such as jet boating, rafting and canoeing would not be hindered by AMF rights as they occur on the water flowing over the riverbed.

Fishing

The Waipara River is not a particularly popular river for fishing as the river system



is not a favourable environment for salmonids. However, the river does provide a fishery that has some value for locals for recreational fishing and mahinga kai. The highest diversity of fish species occurs in the lower reaches with fish populations being dominated by bluegill bullies, upland bullies and torrentfish. In the middle and upper reaches, upland bullies dominate. Shortfin and longfin eels are found throughout the river system and could provide a minor recreational fishery. There is also some minor use of the river mouth and lagoon area for whitebaiting when flows are suitable. White baiting at the river mouth is managed by the Department of Conservation.

Hunting

Hunters have a long history of using the Waipara River bed for hunting small mammals such as rabbits and possum and game bird hunting at the river mouth. Game bird hunting is managed by North Canterbury Fish and Game. Today, people are attracted to the Waipara River to enjoy the outdoors, engage with nature and to make use of the recreation and leisure opportunities it provides. The land directly adjoining the river is becoming more populated as the land is subdivided giving rise to lifestyle blocks and vineyards. With the growing number of visitors to the river and increasing development along the river, the potential for conflict between hunters and other users of the river escalates.

The use of firearms in New Zealand is controlled by the Arms Act 1983 and regulations made under that Act. The New Zealand Police administer the Arms Act and issue licences and permits authorised by the Arms Act. Under the Arms Act it is an offence to discharge a firearm in or near a dwellinghouse or in a public place so as to endanger property or to endanger, annoy, or frighten any person.

Large sections of the river are subject to AMF rights and as such the riverbed is effectively in private ownership and permission should be obtained from the landowner to access these parts of the river to carry out any recreational activity. It is likely that people using the river for recreational activities such as hunting and camping are unaware of the ownership regime in the river and subsequently the constraints around the use of firearms and camping in the river. A number of incidents have been reported where firearms have been used in close proximity to

dwelling and/or other river users with the potential risk for injury or even death. In addition, firearms have been used to poach or indiscriminately kill livestock on adjoining properties.

Dogs

The Waipara River is a popular location for dog owners to exercise their pets. The tracks and open space provide extensive area for dog exercising. Dog control in the Hurunui District is governed by the Hurunui District Council Dog Control Policy and Bylaw 2008. Under this bylaw, the Waipara River is considered a public place. The bylaw requires that the owner or person in possession of a dog in a public place must keep that dog under effective control at all times. Effective control is defined under the bylaw to mean that the dog is either confined on private land, on a leash or under effective voice command where the dog will come and sit or stop on command. The bylaw also requires that the owner or person in possession of a dog in a public place must, remove any faeces deposited by the dog. Under the Dog Control Bylaw, dogs are prohibited at the Waipara River Mouth.

Picnicking, Camping and Overnight Stays

Camping is a popular recreational activity beside some sections of the Waipara River particularly during the summer months. In many instances, people have been camping in these areas of the riverbed for generations. The most popular areas for camping in the riverbed appear to be around the State Highway 1 (SH1) Bridge area downstream to the Waipara River mouth. Limited camping also occurs upstream from the SH1 Bridge to Doctors Gorge. The Waipara River contains two nohoanga sites which allow Ngāi Tahu to occupy these sites for up to 210 days per year between mid-August and the end of April to facilitate customary activities such as fishing and gathering of other natural resources. One of the nohoanga sites is located at the Waipara River mouth with the second site located near the end of Barnetts Road. With the exception of the two nohoanga sites, the Waipara River does not contain any formal or serviced camping sites. The Hurunui District Council's Freedom Camping Bylaw 2011 seeks to minimise the potential adverse environmental effects of freedom camping. The bylaw only applies to Council controlled public areas, including a road or a reserve that is not an accommodation facility. Under the



bylaw, freedom camping is prohibited at any Council controlled public area within 500 metres of an accommodation facility.

Barbeques and Fires

There are currently no formal barbeques or fireplaces in the Waipara River bed. The extensive areas of rank vegetation in the river are likely to pose a fire risk during dry conditions. Any wild fire in the river would threaten river control plantings, restoration plantings, fences, structures and public safety. The Department of Conservation (DOC) is responsible for the control of fire in all New Zealand riverbeds where this is on unoccupied crown land or crown reserve. The rules governing fire restrictions are outlined in the Forest and Rural Fires Act 1977. It is the Department of Conservation's responsibility for publicly notifying changes in the fire season. All areas under DOC fire control have a year round restricted fire season, which means any open air fires require a written permit, with the exception of small fires that provide for cooking and comfort. If fire conditions worsen DOC may declare a prohibited fire season, in which case all permits are cancelled and no fires may be lit. Any person found to have started a fire in a DOC controlled area may be personally liable for the costs of fighting the fire should it get out of control.

Key issues and opportunities identified through research and consultation

The research and consultation undertaken both prior to and during the development of this strategy has identified the following key issues with regard to recreational activities:

In general the community agrees that the Waipara River boasts some unique features and special values and that there is a desire to maintain some form of access balanced with recreational opportunities in this environment provided that natural features, fossil deposits and ecosystems are protected from the impacts of vehicles. Concern was expressed with respect to the potential conflict between those enjoying the 'peace and quiet' values of the river and surrounding environment, such as adjoining landowners, hikers, swimmers and fishermen, and those that choose to use motorised vehicles in the river bed. Conflicts between public access and landowner rights/safety and security are also an issue. As mentioned above, the use of

motor vehicles has encouraged misuse and vandalism in the river and vehicles have also been responsible for causing damage to the river banks through erosion and sedimentation of the river affecting water quality and clarity.

It is likely that people using the river for recreational activities such as hunting and camping are unaware of the ownership regime in the river and subsequently the constraints around the use of firearms and camping in the river. A number of incidents have been reported where firearms have been used in close proximity to dwellings and/ or other river users with the potential risk for injury or even death. With respect to dogs, the community notes that uncontrolled animals can disturb nesting birds and be an issue particularly in areas with high recreational use such as the area around the State Highway 1 Bridge. Adjoining landowners are particularly concerned that unvaccinated dogs have the potential to spread sheep measles to livestock.

In terms of camping, the concerns of the community include the potential pollution of waterways and other places with human waste and rubbish; the risk of fires; loss of amenity and privacy for residents living in close proximity to camping hotspots; the increased risk of crime and; the potential conflict between campers and other users of the river such as those carrying and using firearms and motorised vehicles.

Fire is one of the greatest threats to our environment. The devastating effects of fire are obvious. The use of fires for cooking, warmth or atmosphere has environmental consequences. Fires use up wood, destroy insects and other animal life, and they can scar sites with blackened and charred fireplaces. - Given the existing provisions in terms of the Forest and Rural Fire Act, it would appear that the main issue with respect to fire is educating the public and enforcement of the provisions. As there are only two fire seasons, restricted and prohibited, the Working Party may want to include fire season information on information signage established at the river. Other forms of education could include public notices or articles in the local papers, information on the Council's webpage, and notices in 4WD club newsletters and websites.



RECREATIONAL ACTIVITIES – ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
To provide for safe and balanced recreation with a minimum of conflict between widely different user groups	Educate users on the values of the river environment	<ul style="list-style-type: none"> Information on legal and environmental obligations provided at key access points in the form of display panels / signage Information provided to 4WD, ATV and trail bike clubs by way of leaflets and maps Information available on the Council's website 	<ul style="list-style-type: none"> Access points are signposted and adequate maps are available. Increased understanding by river users of the river environment 	HDC, ECAN, DOC
	Eliminate noisy and dangerous misuse of vehicles in the heavily used sections of the river and minimised elsewhere	<ul style="list-style-type: none"> Encourage motorbikes to use only that part of the river between State Highway 1 and Webbs Road Main access points to the river be given a tidy appearance to reflect its high community value and give impression of a cared for environment Increased enforcement of traffic regulations by NZ Police 	<ul style="list-style-type: none"> The number of complaints regarding noisy motorbikes in the river reduces each year Main access points to the river are inviting and with appropriate information readily accessible 	HDC, Police
	Encourage pedestrian access throughout the riverbed	<ul style="list-style-type: none"> Extend walking opportunities both to and along the river through the provisions in the District Plan requiring the creation of esplanade strips on subdivisions adjoining the river Establish a fund to meet the requirements to compensate for esplanade strips Encourage adjoining landowners with AMF rights to allow pedestrian access across private land 	<ul style="list-style-type: none"> Walking opportunities both to and along the river are increased Walkers feel safe and secure 	HDC, CRC, DOC, LINZ



What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
	Provide for mountain biking and horse riding in certain areas	<ul style="list-style-type: none"> • Signage acknowledging that horse riding and mountain biking are appropriate activities within the riverbed downstream of White Gorge to the river mouth • Investigate the feasibility of developing a dedicated mountain bike track on the south side of the river in the area between Webbs Road and Golf Links Road 	<ul style="list-style-type: none"> • Increased use of the riverbed by mountain bikers and horse riders 	HDC, CRC
	Provide for four wheel drive activities in certain areas	<ul style="list-style-type: none"> • Ban motorised vehicles from parts of the river with high ecological or geological values • Install signage at prominent locations indicating where motorised vehicles are permitted 	<ul style="list-style-type: none"> • Decreased use of motorised vehicles in those areas identified as having high ecological and geological values 	HDC, CRC
	Encourage camping in certain areas of the river	<ul style="list-style-type: none"> • Investigate land along the south bank of the river between Golf Links Road and Webbs Road for camping areas • Investigate land from Wash Creek to 1km west of the SH1 Bridge, excluding the south bank from Darnley Road west, for camping • Establish signage at public access points identifying areas where camping is permitted 	<ul style="list-style-type: none"> • Camping occurs only in those parts of the river that are identified as appropriate areas 	HDC
	Provide for dogs in accordance with the existing provisions of the Hurunui District Dog Control Bylaw with one exception	<ul style="list-style-type: none"> • Instigate a change to the Hurunui District Dog Control Bylaw to require dogs to be on a leash at all times when within 50 metres of the swimming hole near the Waipara Boys Brigade Camp. • No dogs allowed in the swimming hole • That HDC consider adding dosing for sheep measles in the next review of the Dog Control Bylaw 	<ul style="list-style-type: none"> • Hurunui District Dog Control Bylaw is amended to take into account the provisions sought • Behaviour of dogs and their owners is in accordance with the Dog Control Bylaw 	HDC



What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
	Provide for fishing and white-baiting	<ul style="list-style-type: none"> • Provide a designated motor vehicle track for white-baiting access in the vehicle prohibition area at the Waipara River mouth during the season 		Fish & Game, DOC
	Recognise that the use of firearms in a public place can be dangerous and irresponsible use is illegal	<ul style="list-style-type: none"> • Encourage the responsible use of firearms • Continue to allow game bird hunting at the river mouth provided this activity is managed in a way that ensures there is no unacceptable risk or inconvenience to other users of the river • Develop an education programme to raise people's awareness of the proximity of residences and the dangers to other river users. 	<ul style="list-style-type: none"> • Irresponsible use of firearms in the riverbed reduces each year • Adjoining landowners and other river users feel safe 	Fish & Game HDC
	Reduce risk from fire	<ul style="list-style-type: none"> • Support current fire regulations with the provision appropriate signage be made available at all public access points to the river. 		HDC, CRC, DOC



KARETU BRIDGE TO WHITE GORGE - MANAGEMENT AREA

Karetu Bridge crosses the Waipara River South Branch between Ram Paddock Road and MacDonald Downs Road approximately 800 metres upstream from the confluence with the Waipara River North Branch. A short distance downstream of the confluence is Ohuriawa Gorge, a geologically distinctive feature of the Waipara River. The gorge cuts through the southern extremity of the sandstone Doctors Hills. The gorge is 100-120 metres deep, steep-sided and clad in regenerating shrubland of which exotic species are dominant (Mosley, 2003). The surrounding hillsides consist of unimproved pasture, reverting shrubland and pine forestry. The river is single threaded, with a gravel bed and periodic rock outcrops. The banks are lined with willows. The Gorge is considered to have high natural character due to the combination of active geological processes that have created the Gorge, the active regeneration of shrubland on the valley sides, and the invisibility from river level of any structures or other obvious signs of human activity. Ohuriawa Gorge is accessible only via the riverbed from the road bridge on MacDonald Downs Road across the South Branch one kilometre upstream, or from the Laidmore Road ford one kilometre downstream. This part of the river is subject to AMF rights and as such there is no public access to the river unless by prior arrangement and approval with the relevant landowners.



Downstream from Karetu Bridge

Between Ohuriawa Gorge and White Gorge the river flows for about three kilometres through a depression that marks more erodible Cretaceous formations (Mosley, 2003). The White Gorge area is one of unique and internationally renowned geological significance. It contains the only exposed, continuous geological sequence from the Cretaceous to the Miocene and many examples of fossilised material from

the Mesozoic and Tertiary Periods. It is one of the few sites where the Cretaceous – Tertiary (K/T) boundary is exposed. The landscape is interesting with a mix of limestone escarpments, alluvial terraces and tightly meandering, gravel-bedded river that periodically cuts into steep rocky bluffs and cliffs. Much of the Gorge and surrounding area forms part of the Weka Pass Outstanding Landscape unit as identified in the District Plan. The only access to this part of the river is via the Laidmore Road

ford. This part of the river is subject to AMF rights and as such there is no public access to the river unless by prior arrangement and consent of the relevant landowners.

The main contention of landowners is that they seek proper respect for their private freehold property and that if members of the public want to access their property then they should ask the landowner for their permission. Landowners in this section of the river have a long history of cooperating with scientists, hobbyists and the general public wishing to study the geology and fossils. The issue is not so much one about access but more around the use of vehicles and the damage they cause to the bed and banks of the river in this geologically sensitive area.

There is also a long, narrow section of Crown land administered by the Department of Conservation located along the north bank of the river approximately 0.65 – 2.50 kilometres upstream from the Laidmore Road ford. The predominant land use on the northern side of the river consists of pine forestry plantation. Given the adjacent forestry plantations and Department of Conservation reserves, the community is concerned regarding the potential risk from fire and the damage that this could cause.

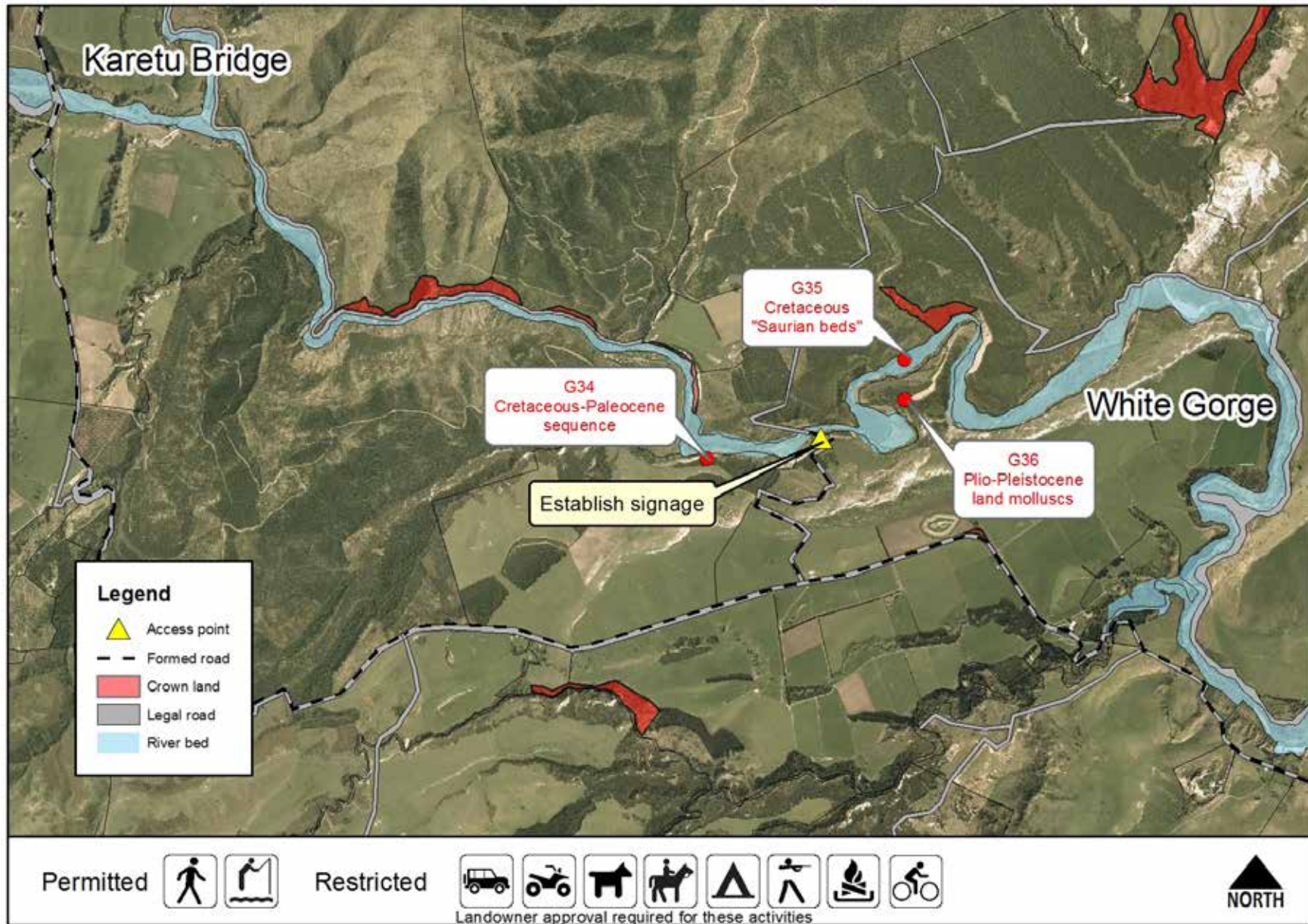


KARETU BRIDGE TO WHITE GORGE - ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Protect the historical and geological values within this area of the river	Motor vehicles to be banned in this management area, unless by prior arrangement and permission of the landowners.	<ul style="list-style-type: none"> Use signage to restrict motor vehicle access 	<ul style="list-style-type: none"> Reported incidences of use of the river by motor vehicles reduces each year 	HDC
	Educate and inform the general public about the significance of the area.	<ul style="list-style-type: none"> Update website regularly with information Establish signage / display boards at access points to the river 	<ul style="list-style-type: none"> An increased respect by river users of the geological and natural features in this part of the river 	HDC, CRC, DOC
	Plan change to be promoted to correct errors with respect to the information provided in relation to the Significant Natural Areas identified in the District Plan	<ul style="list-style-type: none"> Update and amend information with respect to the identified Significant Natural Areas as part of the District Plan review 	<ul style="list-style-type: none"> District Plan is amended to accurately reflect the location and information with respect to the geological features in this part of the river 	HDC
Ensure that recreational activities protect the amenity values of the river	Prohibit camping, dogs, lighting of fires and the carrying and use of firearms (unless by prior arrangement and approval of relevant landowners)	<ul style="list-style-type: none"> Signage and education material identifying the restrictions in this management area of the river 	<ul style="list-style-type: none"> Reported incidences of camping, dogs, lighting of fires and the carrying and use of firearms in this section of the river reduces each year 	HDC



KARETU BRIDGE TO WHITE GORGE - ACTION MAP



WHITE GORGE TO STRINGERS BRIDGE - MANAGEMENT AREA

From White Gorge to Stringers Bridge, the Waipara River is constrained between steep, high terraces on either side of the river with the river shingles being large and coarser than those found downstream.

There are a number of landowners adjoining this section of the river particularly on the southern side. The predominant land use consists of pastoral farming activities and viticultural development. The river banks and terraces throughout this section of the river are heavily infested with willows and other exotic plant species such as broom, gorse and exotic grasses. There are a number of dwellings located on top of the river terrace in close proximity to the river. In terms of land ownership, the land on the south bank of the river is subject to AMF rights and as such is effectively in private ownership to the centre of the river. There is an unformed legal road on the northern bank of the river. The unformed legal road is no different in law from formed roads and as such the public have the right to use them on foot, on horse, or in vehicles. While the unformed legal road allows the public to use that part of the river contained within the road, in reality it is not possible to stay within the designated road as the terrain and vegetation within the riverbed is diffi-



White Gorge

cult to negotiate. This means that at times, users have to cross onto parts of the riverbed that are subject to AMF rights. The landowners adjoining this section of the river agree in principal to unrestricted non-motorised access and appropriate, controlled, motor vehicle access from Stringers Bridge to Waipara Gorge (White Gorge) without any requirement to seek prior consent from individual landowners provided that:

- Vehicle access is limited to the first weekend of each month during daylight hours (organised clubs may have extra trips by landowner approval).
- Small groups only.
- Vehicles must be road licensed.
- Vehicles must remain in the riverbed and follow a single track and avoid driving up the main stream of the river. No mud plugging.
- No camping, no fires, no shooting, no dogs, no rubbish.
- Vehicles using the riverbed do so at their own risk.
- Landowners will not accept liability of any kind for vehicles accessing the river, nor guarantee to be able to assist with vehicle recovery should it be necessary.

This recommendation to be reviewed within 12 months from the adoption of the Strategy.

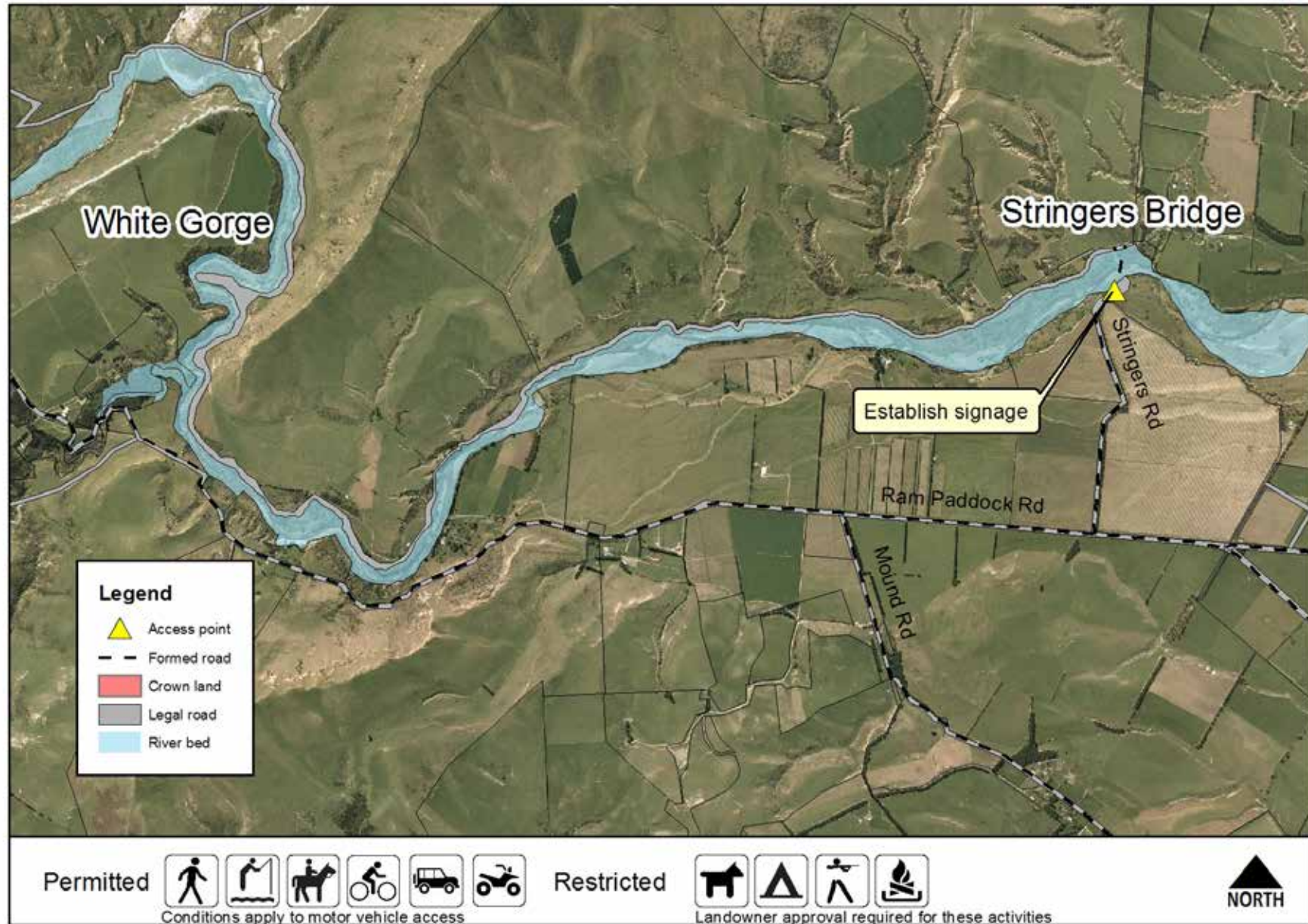
The only existing access point at Stringers Bridge is currently located on the north side of the river and is not particularly obvious from the public road. It has been suggested that the access point be relocated to the south side of the river so that it is more readily visible and provide for a more direct access to the river.

WHITE GORGE TO STRINGERS BRIDGE - ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Ensure that recreational activities do not reduce amenity values	Control motor vehicle access from Stringers Bridge to White Gorge	<p>Motor vehicle access permitted without any requirement to seek prior consent from individual landowners provided that:</p> <ul style="list-style-type: none"> • Vehicle access is limited to the first weekend of each month during daylight hours (organised clubs may have extra trips by landowner approval). • Small groups only. • Vehicles must be road licensed. • Vehicles must remain in the riverbed and follow a single track and avoid driving up the main stream of the river. No mud plugging. • No camping, no fires, no shooting, no dogs, no rubbish. • Vehicles using the riverbed do so at their own risk. • Landowners will not accept liability of any kind for vehicles accessing the river, nor guarantee to be able to assist with vehicle recovery should it be necessary. • Install signage at access point advising users of the restrictions in this part of the river <p>This recommendation to be reviewed within 12 months from the adoption of the Strategy.</p>	<ul style="list-style-type: none"> • Motor vehicles accessing this area of the river do so in accordance with the provisions 	Landowners
		<ul style="list-style-type: none"> • Relocate access point to south side of river, upstream of bridge 	<ul style="list-style-type: none"> • Access point is relocated 	HDC
	Prohibit camping, dogs, lighting of fires and the carrying and use of firearms (unless by prior arrangement and approval of relevant landowners)	<ul style="list-style-type: none"> • Signage and education material identifying the restrictions in this management area of the river 	<ul style="list-style-type: none"> • Reported incidences of camping, dogs, lighting of fires and the carrying and use of firearms in this section of the river reduces each year 	HDC, CRC
Enhance the natural character of the river	Promote native planting of river margin and bridge approaches	<ul style="list-style-type: none"> • Encourage landowners to establish native riparian planting • Provide assistance for funding applications • Use local groups to assist in carrying out planting projects on public land 	<ul style="list-style-type: none"> • Native riparian planting increases along the river margins and access points to the river 	CRC, HDC, DOC, land-owners



WHITE GORGE TO STRINGERS BRIDGE - ACTION MAP



STRINGERS BRIDGE TO BARNETTS ROAD - MANAGEMENT AREA

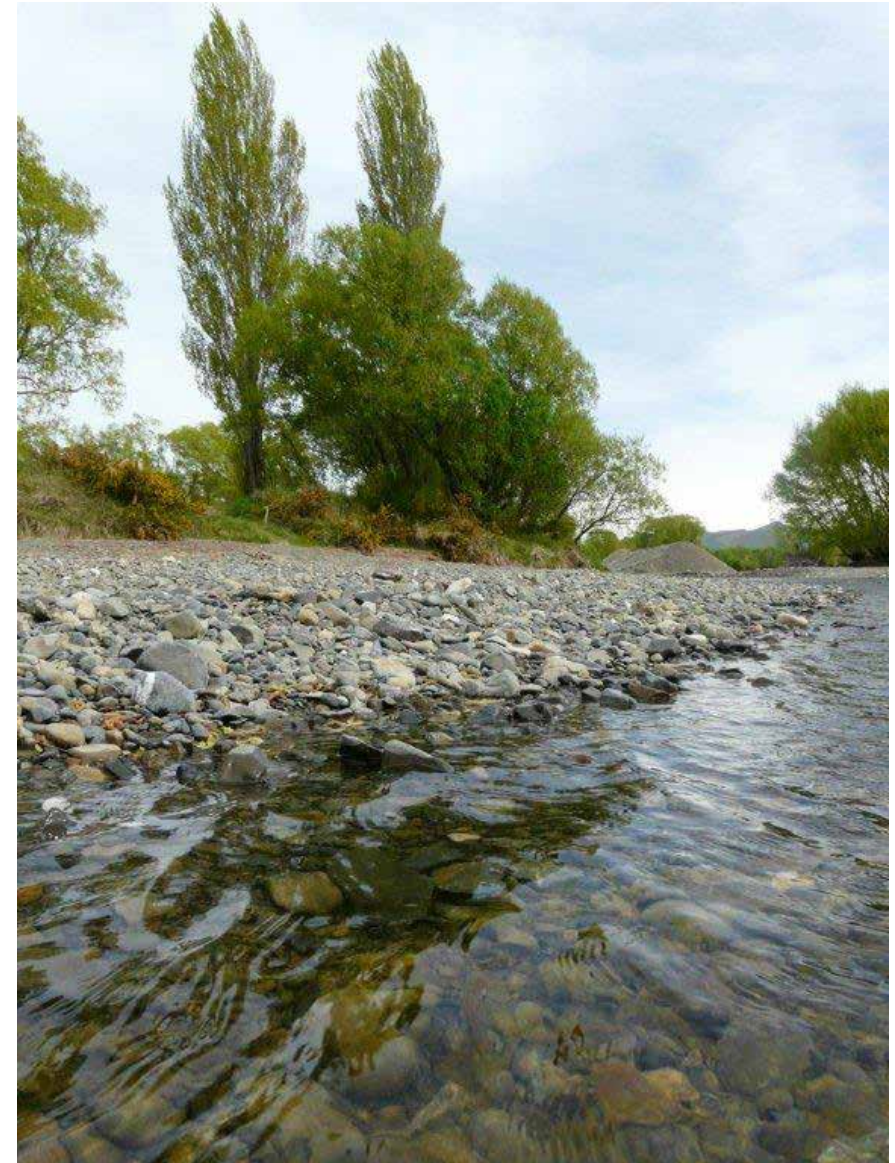
This management area incorporates that part of the river located between Stringers Bridge and Barnetts Road. The riverbed throughout this section is wide with elevated river terraces along the north and south banks. The banks throughout this area are heavily infested with willows and other exotic plant species such as broom, gorse and exotic grasses. There are three access points to the Waipara River in this section. These are located at Stringers Bridge, Barnetts Road and Darnley Road.

The land on the north bank of the river is comprised of a number of pastoral farming properties. The land on the south bank of the river consists of smaller parcels of land held under different ownership. Land use on the south bank of the river consists predominantly of lifestyle blocks and viticultural development.

The Waipara Boys Brigade Camp and swimming hole is located on the south bank of the river upstream of Darnley Road. The Waipara Boys Brigade Camp provides accommodation and a range of outdoor activities for small to large groups. Facilities on the site include a BMX track, confidence course, flying fox and abseiling wall. Groups staying at the camp often visit the Waipara River to go four-wheel driving, boating, rafting and swimming at the man-made swimming hole located in the vicinity of the site in the river bed.

The Millist Esplanade Reserve is located along the south bank of the river upstream from the Waipara Boys Brigade Camp. The 1.17 hectare reserve is owned and administered by the Hurunui District Council. The reserve is open and accessible from the river bed. The reserve consists of shingle river bed and willow tree plantings. The reserve could be enhanced with the establishment of some amenity trees and riparian planting.

This section of the river is popular with four wheel drive and motorbike enthusiasts and contains a number of natural swimming holes which are popular with locals. This area has seen a level of inappropriate and unacceptable behaviour usually associated with vehicles. Inappropriate use of firearms has also been a significant issue with the death of livestock in some instances and use of firearms within close proximity to dwellings located on the terrace above the riverbed.



Millist Esplanade Reserve

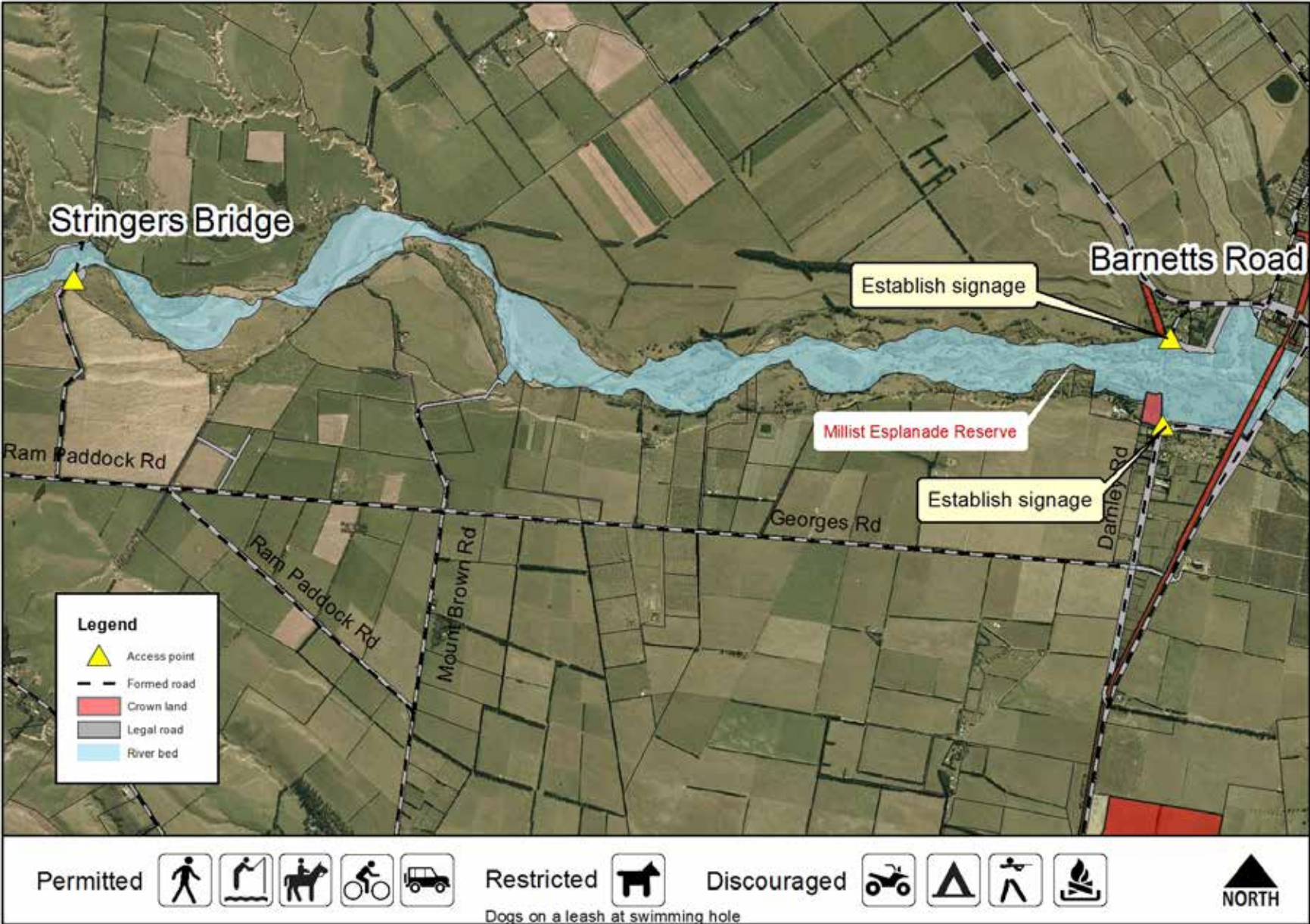


STRINGERS BRIDGE TO BARNETTS ROAD - ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Ensure that recreational activities do not reduce amenity values	Discourage motorbikes from using this part of the river	<ul style="list-style-type: none"> Install signage at access points to river 	<ul style="list-style-type: none"> Number of complaints regarding noisy motorbikes in this part of the river reduces each year 	HDC
	Ensure that dogs are controlled in the vicinity of the Waipara Boys Brigade swimming hole	<ul style="list-style-type: none"> Instigate a change to the Hurunui District Dog Control Bylaw to require dogs to be on a leash at all times when within 50 metres of the swimming hole near the Waipara Boys Brigade Camp. No dogs allowed in the swimming hole 	<ul style="list-style-type: none"> Hurunui District Dog Control Bylaw is considered for amendment to take into account the provisions sought. 	HDC
	Discourage the use of firearms in this section of the river	<ul style="list-style-type: none"> Install signage at access points to the river 	<ul style="list-style-type: none"> Number of complaints regarding irresponsible use of firearms in this part of the river reduces each year 	HDC
Enhance Millist Esplanade Reserve	Investigate the feasibility of providing a riverside walkway that connects with the adjoining DOC esplanade reserve	<ul style="list-style-type: none"> Work collaboratively with the Department of Conservation and the Waipara Boys Brigade Camp Seek funding for walkway project 	<ul style="list-style-type: none"> When a riverside walk is established along the south bank of the river 	HDC, DOC, Landowners
	Incorporate riparian and amenity tree planting	<ul style="list-style-type: none"> That the reserve is enhanced with amenity and riparian plantings for passive recreational use. 	<ul style="list-style-type: none"> That adjoining owners be encouraged to manage the reserve in conjunction with their land holdings. 	HDC, landowners



STRINGERS BRIDGE TO BARNETTS ROAD - ACTION MAP



STATE HIGHWAY 1 BRIDGE - MANAGEMENT AREA

This management area includes that part of the river located between Barnetts Road and Wash Creek.

The State Highway 1 (SH1) Bridge area is a very high use area being located in close proximity and within view of State Highway 1 (SH1) and the township of Waipara. There are numerous access points to the river although these are all located upstream from the SH1 Bridge. Access on the northern side of the river is available at three locations including Barnetts Road, an unformed legal road and an access track near the intersection of Weka Pass Road and SH1 turnoff. The river can be accessed on the southern side of the bridge from the end of Darnley Road and directly from SH1 just south of the bridge. Some of the access points from State Highway 1 and State Highway 7 do not provide safe entry or exit from the river. Greater encouragement for the use of particular access points could be undertaken including the incorporation of signage and information on these access points.

The land on the downstream side of the bridge is privately owned although there is an esplanade strip along the northern bank of the river from SH 1 to Wash Creek. There is also an esplanade strip along the south bank of the river directly adjoin-

ing the Mud House Winery. The Department of Conservation owns a parcel of land between Darnley Road and the State Highway.



Swimming hole near SH1 bridge

The area is a popular camping and picnicking spot although there are no formal camping sites or toilet facilities in the area. There is a nohoanga site located towards the end of Barnetts Road although it is not clear exactly where the site is located. Overlays on aerial mapping give an indication of where the site is located, however these are not considered definitive.

The area contains some gravel extraction activities which have been consented by the Canterbury Regional Council. Given the popularity of the area, the community has expressed concern regarding the potential safety of other river users given that the gravel extraction activities involve the use of large vehicles and heavy machinery.

The community also has concerns regarding the level of rubbish that is disposed of in this area including garden waste, building rubble and car bodies.

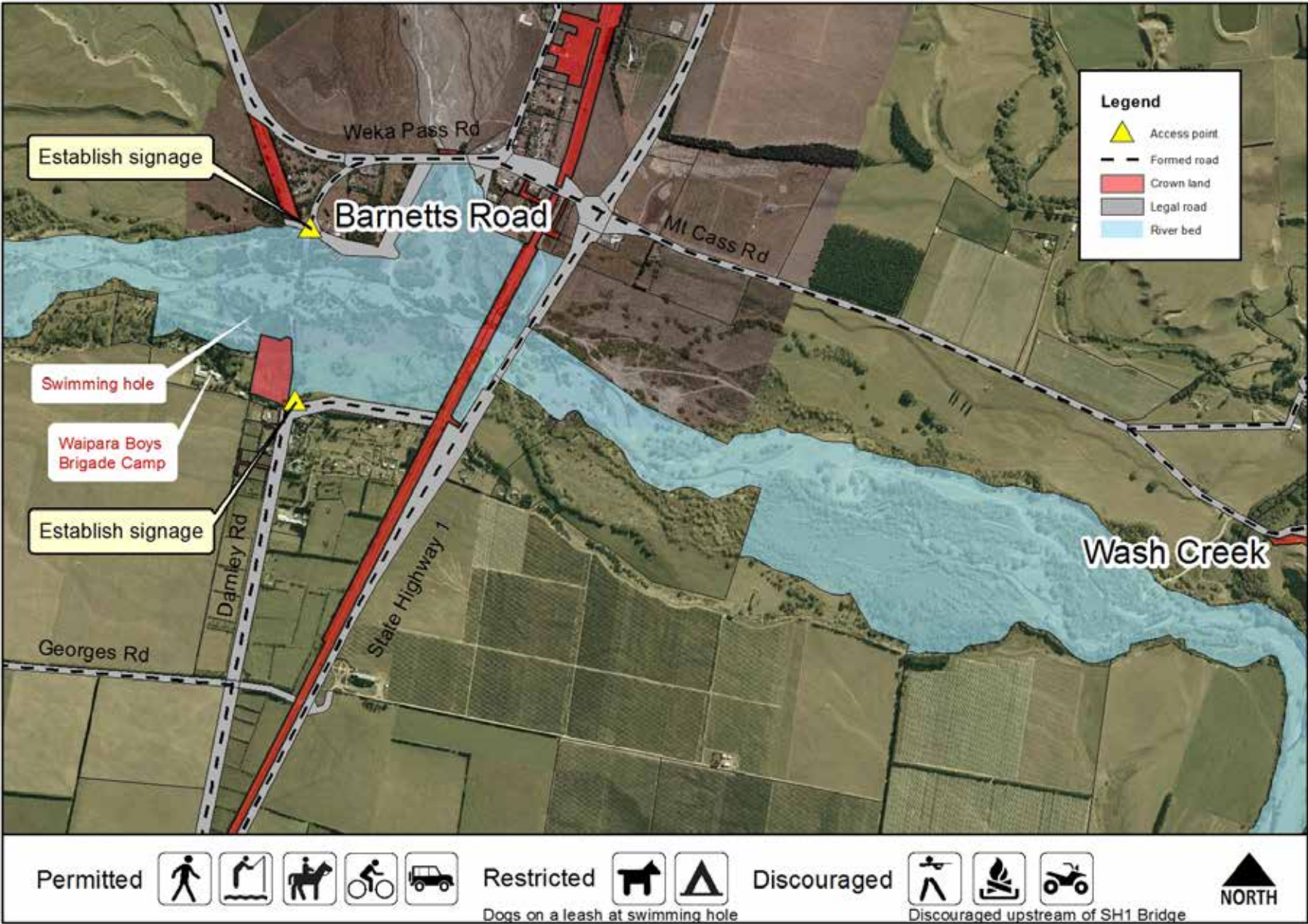


STATE HIGHWAY 1 BRIDGE - ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Improve the safety and efficiency of access points and vehicle use in the river	Allow for appropriate motor vehicle use throughout this area	<ul style="list-style-type: none"> • Signs established at access points explaining the significance of the environment and discouraging rubbish dumping • Motorbikes be discouraged from using the area upstream of the SH1 Bridge 		HDC
Enhance the natural character of the river	Encourage land use practices which minimise contamination of the river	<ul style="list-style-type: none"> • Promote the exclusion of stock from the river. Where appropriate advocate fencing and restoration/revegetation work and stock water reticulation 		CRC, HDC
Ensure that a wide range of recreational activities are provided for	Facilitate the development of recreation and picnic areas with appropriate facilities	<ul style="list-style-type: none"> • Identify areas suitable for development, facilities required i.e. rubbish bins, toilets, picnic tables 		HDC, DOC



STATE HIGHWAY 1 BRIDGE - ACTION MAP



WASH CREEK TO WEBBS ROAD - MANAGEMENT AREA

The riverbed throughout this area is wide although constrained on either side by large steep cliffs formed where the river has cut through the underlying sediments. The lower gorge at Teviotdale is rich in fossils and is recognised as a Significant Natural Area (G30) in the Hurunui District Plan. The Double Corner shell beds, as these fossil beds are referred to, occur on either side of the lower Waipara River gorge, at the area known as the 'Horse-shoe' (a deep meandering loop) about three kilometres upstream from Greenwood's Bridge. The name Double Corner was adopted for the sheep station which during the later part of the 19th century covered most of the country between the Waipara and Kowai Rivers. The fossil beds consist of fine brown sands and are rich in shell fossils, mostly molluscs. These fossils date back to the Miocene period and are about twelve million years old. The shell beds consist of several different levels, each of which contains a variety of shells. When these beds are examined closely it can be seen that the sequence of the levels is repeated. This is because a 'fault' or break in the rocks runs across the river in this area. Movement along the fault has caused the rock containing the various shell beds to slide up and over each other so that the areas which were originally lying side by side have moved so that they now lie one on top of the other. One of the more interesting fossil beds consists of thousands of tiny bivalve shells of the species *Turia*. Many of the *Turia* shells have tiny holes which were made by carnivorous, snail-like molluscs which bored through the shell of the living *Turia* eating the animal inside.

There are two public access points to the Waipara River in this area. These are



Waipara River at Greenwood's Bridge

located at the end of Webb's Road and the northern side of Greenwood's (Teviotdale) Bridge on Double Corner Road. The river can be accessed both upstream and downstream of Greenwood's Bridge. There is a large area directly upstream of the bridge where vehicles can turn around and park. The area around Greenwood's Bridge is a popular camping and picnicking spot with a number of good swimming holes in the vicinity.

This section of the river is one of the most frequently trafficked areas and is criss-crossed with a number of vehicle tracks. The Horse-shoe area is very popular with motorbikes and ATVs. One of the main concerns raised by the community is the noise generated from these activities and also the anti-social behaviour associated with vehicle use in this area, such as dumping of rubbish and car bodies and vandalism of fences and structures on adjoining properties..

With respect to land ownership the majority of land on both the south and north banks are subject to AMF rights and as such is effectively in private ownership. In the past, adjoining landowners have attempted to keep the public out of this area but this has proved to be a futile exercise with gates

and fences being constantly removed and damaged. Given these frustrations, some of the adjoining landowners are prepared to allow the public to use this area for recreational activities provided that their private property is respected. However, this situation could change if the public continues to abuse this privilege through inappropriate and antisocial behaviour.

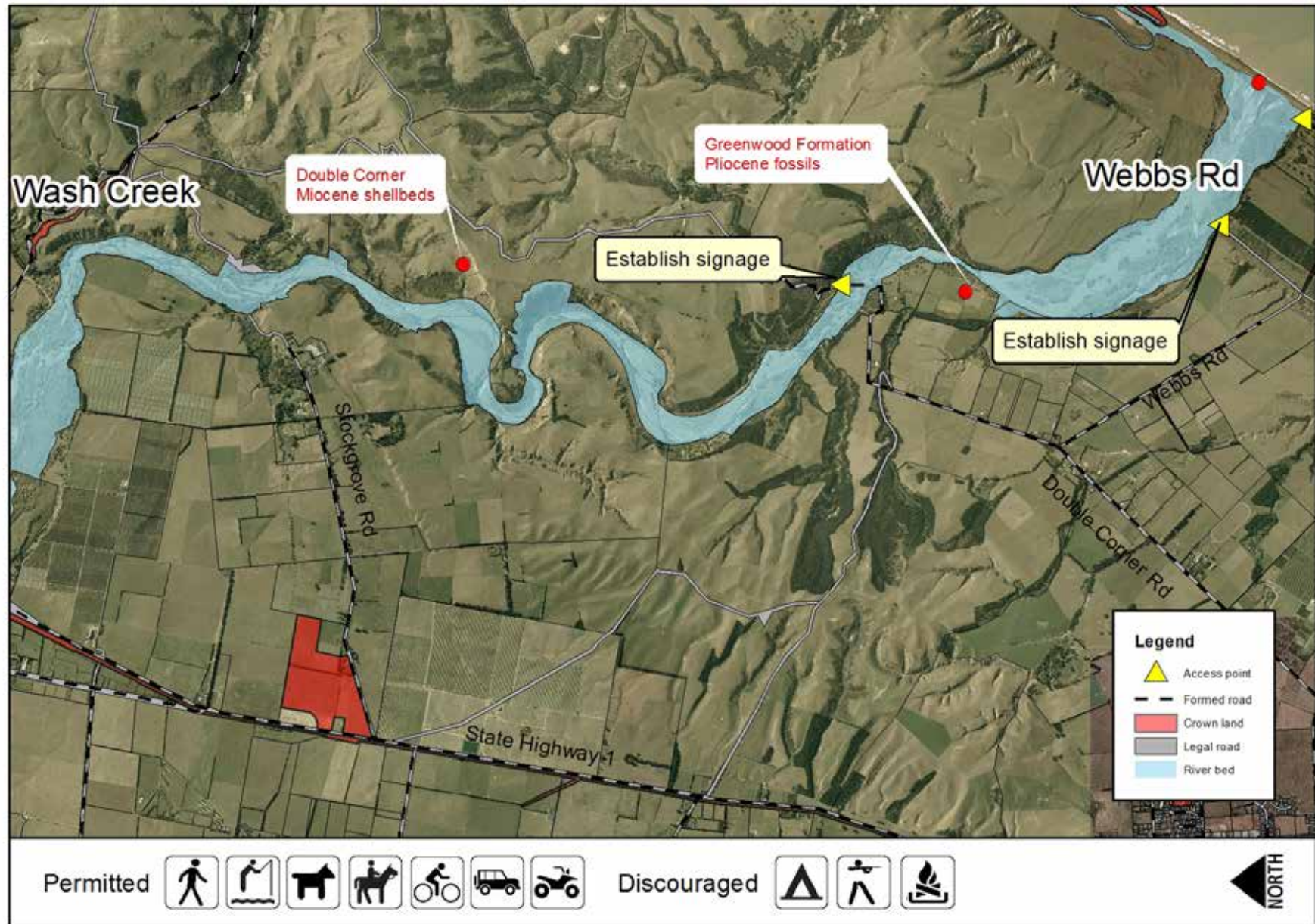


WASH CREEK TO WEBBS ROAD - ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Ensure that recreational activities do not reduce amenity levels	Encourage appropriate motor vehicle use throughout this area	<ul style="list-style-type: none"> Increased enforcement of traffic regulations by NZ Police 	<ul style="list-style-type: none"> The number of complaints regarding noisy motorbikes in the river reduces each year Main access point at Greenwood Bridges is inviting and with appropriate information readily accessible 	HDC, CRC, DOC
Enhance the natural character of the river	Promote native planting of the river margin and bridge approaches to enhance landscape amenity values	<ul style="list-style-type: none"> Use local groups to assist in carrying out planting projects Provide help for funding applications 	<ul style="list-style-type: none"> Native and riparian planting increases along the river margins and access points to the river 	CRC, HDC, DOC, land-owners



WASH CREEK TO WEBBS ROAD - ACTION MAP



WAIPARA RIVER MOUTH - MANAGEMENT AREA

The Waipara River Mouth Management Area covers that portion of the Waipara River located between the coast and Webbs Road. The river flows across a narrow coastal plain to the Waipara Lagoon at the coast. The lagoon consists of still water with unstable gravels and bars between it and the sea. The lagoon is narrow and extends largely to the north of the river, immediately behind the beach. The lagoon is generally opened to the sea by freshes of 8-10 cumecs in the Waipara River and closes again when flow falls below 4 cumecs. The District Plan identifies the river mouth and lagoon to the north as a Significant Natural Area (SNA6) and is described as 'an unstable mouth of small braided river with flow fluctuations causing frequent changes'. The nature of the river mouth reflects the balance between coastal and fluvial processes, principally during extreme conditions. The form of the mouth is influenced predominantly by extreme events. There is minor use of the river mouth and lagoon for whitebaiting when flows are suitable and the area is also popular for game-bird hunting during the season.

The Waipara River mouth is an important and regionally unique estuarine system having moderate to high values for wildlife. The river mouth is ranked as having national to international significance for threatened bird species. Threatened

species found in this area include the wrybill, bittern, black fronted tern and banded dotterel. A total of 25 wetland bird species have been recorded, including migratory waders which are otherwise uncommon in New Zealand or Canterbury. Wader numbers are variable and when river flow is low suitable habitat is limited. This area is also an important nesting and feeding ground for a number of bird species. The

community is concerned that these important bird nesting sites are protected from vehicle damage and pest animals.

The lagoon and associated coastline was a significant source of mahinga kai for Ngāi Tahu and under the Ngāi Tahu Claims Settlement Act 1998 a nohoanga site was established towards the end of Golf Links Road. It is not clear exactly where the site is located. It is important to know the exact boundaries of the site to ensure that it is located outside of the proposed vehicle prohibition area. While Ngāi Tahu has exclusive camping rights at this site for up to 210 days per year, the reality is that the nohoanga is not actively used by Ngāi Tūhauriri as the coastal

lagoon to which it relates no longer holds the kai that it once did.

The Waipara River mouth area contains a number of archaeological sites as identified in the District Plan. The River mouth was the site of a prolonged and sustained occu-



Waipara River mouth



pation with two pa sites located on the northern side of the river. The importance of the Waipara River and lagoon are reflected in the Statutory Acknowledgement under the Ngai Tahu Treaty Claims Settlement Act 1998. One of the main priorities for Te Ngai Tuahuriri is better access to and management of the lagoon for mahinga kai.

The surrounding landscape is predominantly unmanaged shrubland, in which exotic trees such as willows, shrubs and grasses are predominant. The community is keen to enhance the natural environment in this area through some of revegetation project.

There are two public access points to the Waipara River in this area. These are located at the end of Webbs Road and Golf Links Road. There is a defined 4WD vehicle track along the north bank of the river to the topographical feature locally referred to as The Rocks – a rocky headland located at the northern most part of Pegasus Bay approximately 2.5 km north of the river mouth. The Rocks is a popular picnic, camping and fishing spot with small boats launched directly from the beach. The 4WD vehicle track currently crosses private land and as such it is important that this route either be legitimised or re-routed so that it traverses publicly owned land.

Northern Pegasus Bay Bylaw 2010

In terms of vehicle access in the estuarine area at the river mouth, the Northern Pegasus Bay Bylaw 2010 seeks to control activities and the use of land, including the use of vehicles, on the foreshore, beaches and adjacent areas of Northern Pegasus Bay. Clause 10.1 of the bylaw specifies that 'no person shall drive any vehicle or ride, lead or otherwise use any horse or horses within the prohibited vehicle area marked on Map H2'. The vehicle prohibited area identified in Map H2 of the bylaw has been reproduced on the Action Map for the Waipara River Mouth Management Area to identify that area where vehicles are prohibited. However, clause 10.2 of the bylaw specifies that 'Notwithstanding clause 10.1 and Map H2, a person may drive a vehicle within the prohibited vehicle area marked on Map H2 during the white-baiting season, for the purpose of whitebaiting, provided they remain on an access track marked by the Council.'

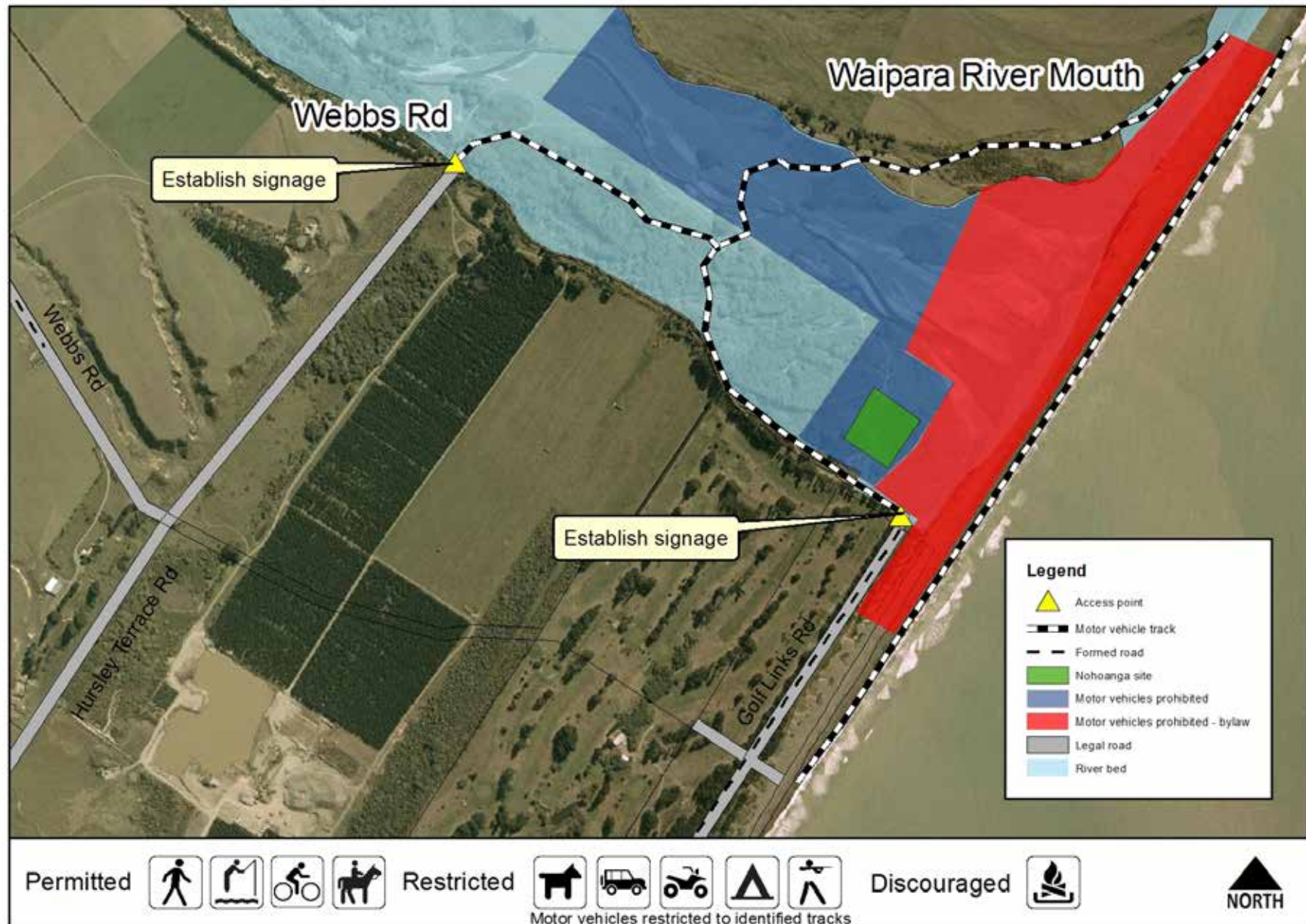


WAIPARA RIVER MOUTH - ACTION PLAN

What we want to achieve - Goals	What we will do - Actions	How we will do it	We know we have succeeded when	Who will lead it
Acknowledge special relationship of tangata whenua with this area	Educate the general public on the cultural values of the area	<ul style="list-style-type: none"> In consultation with Ngāi Tahu install interpretive signage 		HDC, CRC, DOC
Ensure that recreational activities do not reduce amenity levels	Allow for appropriate vehicle access to the Rocks	<ul style="list-style-type: none"> Liaise with the owners of Teviotdale with regard to the access track to the rocks 	<ul style="list-style-type: none"> Vehicle access continues to be provided to the Rocks 	HDC
	Incorporate the relevant provisions of the Northern Pegasus Bay Bylaw 2010	<ul style="list-style-type: none"> That motor vehicles are banned in the Waipara River estuary in the area indicated in red, subject to a designated motor vehicle track for whitebaiting access during the season 		HDC, CRC, DOC
	Ban the use of motor vehicles in the area indicated in blue on the attached plan, subject to a designated motor vehicle track for access to the nohoanga site and a track on the north side of the river	<ul style="list-style-type: none"> Tracks are to be sited to minimise impact on wildlife. 	<ul style="list-style-type: none"> Track marked out with painted stones 	HDC
	Identify whether camping is appropriate in this area	<ul style="list-style-type: none"> Investigate suitable land along the south bank of the river between Golf Links Road and Webbs Road for camping areas 	<ul style="list-style-type: none"> Suitable camping areas demarcated on management area maps and identified on signage 	HDC
	Encourage mountain biking	<ul style="list-style-type: none"> Investigate the feasibility of developing a dedicated mountain bike track on the south side of the river 	<ul style="list-style-type: none"> Dedicated mountain bike track developed Use of area by mountain bikers increases 	HDC
Educate the public on the natural values of the estuary	Establish interpretive signage/ display boards	<ul style="list-style-type: none"> Information to be provided on the Council's website and through signage Interpretive signage to be established at access points and carparking areas 	<ul style="list-style-type: none"> Interpretative signs installed Users of the river have an increased knowledge and respect of the natural values of the river 	HDC, CRC, DOC
	That the statutory authorities work collaboratively on a revegetation project on the south side of the Waipara River Mouth	<ul style="list-style-type: none"> Work collaboratively with local groups to assist in carrying out the work Dedicate set funding for the restoration project Use the Hurunui District Council's biodiversity field advisor to facilitate the project 	<ul style="list-style-type: none"> Increased numbers of native plants 	HDC, DOC, CRC



WAIPARA RIVER MOUTH - ACTION MAP



ACKNOWLEDGEMENTS

The following people contributed to the development of the Waipara River Management Strategy:

Name	Organisation
David Beer	Education Sector
Greg Bennett	Amberley Beach Coast Care
Marie Black	Councillor, Hurunui District Council
Major Ash Brunton	New Zealand Army
Terry Charles	Environment Canterbury (Pest Management)
Gary Cooper	Councillor, Hurunui District Council
Julie Coster	Councillor, Hurunui District Council
Amelia Dalley	Hurunui District Council
Tony Fitzsimmons	Land Owner
Richard Forbes	Landowner, Maungatahi
James Forbes	Landowner, Maungatahi
David Ford	Documentation/photography
Mark Forrester	Landowner
Rob Gerard	Environment Canterbury
Richard Goord	Landowner, Claremont Estate
Nico Haima	Combined Four Wheel Drive Club
Jon Harding	University of Canterbury (Biological Sciences)
Norton Hiller	Canterbury Museum
Sarah Hughes-Games	Waipara Promotions Association
Garry Jackson	Mayor, Hurunui District Council
Brian Jensen	Department of Conservation
Mark Jones	Community Representative
Te Marino Lenihan	Te Ngāi Tūāhuriri Rūnanga

Name	Organisation
Ross Little	Councillor, Environment Canterbury / Hurunui District Council
Leigh Love	Amateur Palaeontologist
Brent Maguire	Combined Four-wheel Drive Club
Dale Mainwaring	Community Representative
Ian McCrory	Fish and Game
Jan Moir	Landowner, Teviotdale
Major Chris Murphy	New Zealand Army
Fred Murray	Forest and Bird
Steve Palmer	Environment Canterbury (Pest Management)
Andrew Parrish	Environment Canterbury
John Radley	Combined Four Wheel Drive Club
Chris Rhodes	Farm Manager, Teviotdale
Helga Rigg	Hurunui District Council
Gareth Renowden	Landowner
Mathieu Sansoucy	Photography
Douschka Saunders	Community Representative
Jeff Scholes	Environment Canterbury (River Engineer)
Ian Turnbull	Landowner
Stuart Ward	Waipara Boys Brigade Camp
Paul Williams	Waipara Residents Association, Community Representative
Ross Williams	Waipara Boys Brigade Camp



REFERENCES

Chater, M., 2002: Waipara River water resource report. Canterbury Regional Council report U02/84.

Hayward, S.A.,; Meredith, A.S.,; Lavender, R.M.,: 2003: Waipara River: assessment of water quality and aquatic ecosystem monitoring, 1999 to 2002. Canterbury Regional Council report U03/11.

Lloyd, I., 2002: The water resources of the Waipara Catchment and their management. University of Canterbury Masters Thesis.

Mosley, P.M., 2003: Waipara River: instream values and flow regime. Canterbury Regional Council report R03/1.

O'Donnell, C.F.J., 2000: The significance of river and open water habitats for indigenous birds in Canterbury, New Zealand. Canterbury Regional Council Technical report U00/37.

Richardson, J.,; Jowett, I.G.,; Bonnett, M.L., 2003: The role of flow regime in maintaining fish communities in the Waipara River, New Zealand.

Richardson, J., and Jowett, I.G., 1994: Fisheries values of the Waipara catchment. Miscellaneous report 173, NIWA, Christchurch.

